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Contents of "Lightning Flashes."

"The Volcanograph," by J. Christie, illustrations: Give them another turn, urged the Doctor—But the Volcanograph cut them short—"A Leaf of Autobiography," by John Oakum; Biography of E. O. Chase, (Nuf Ced), with Portrait; "Prof. Morse and the Telegraph," Benson J. Lossing, LL.D.; Illustrations: Samuel F. B. Morse [from a Photograph by Sarony]—Morse's First Recording Telegraph—Facsimile of the First Daguerreotype of the Face made in America—Facsimile of the First Telegram, with a Facsimile of Prof. Morse's Indorsement of it—Morse's Residence at Locust Grove; Biography of D. C. Shaw, (Oney Gaglin) with Portrait; "The Telegraph Dispatch, a Story of Telegraphy in the Early Days," by J. D. Reid; Biography of Joseph Christie (Werner) with Portrait; "Wives for two, or Joe's Little Joke," E. O. Chase; "\$1,000 Reward—My Foot Race with a Telegram," Ralph W. Pope; "Leander's Tour of Investigation," D. C. Shaw; "Congressional Investigating Committee;" "Song of the Wire"—Poem; "Some Grave Thoughts;" "Kate—an Electro-Mechanical Romance," Charles Barnard, *Scribner's Monthly*, Illustrations: A handkerchief is quickly flirited in the air—the girl sat in the fireman's high seat—Kate unrolled the wire and he took it up—she fell into his arms senseless and white; "Out of Adjustment"—Poem, G. W. Russell; "George Washington Cribbs' Telegram," Joseph Christie; "A Perilous Christmas Courtship, or, Dangerous Telegraphy," J. M. MacLachlan; "Playing with Fire," L. A. Churchill; "Thoughts for Serious Moments;" "A Slight Mistake," L. A. Churchill; "The Telegrapher's Song," J. A. Wyllie; "The Telegrapher (Illustrated) Joseph Christie; "The Vow of the Six Telegraph Operators," G. W. Russell; "Some Oxberence mit a Railroads," C. E. Watts (Yosef); "Scrapes," Geo. H. Bliss; "A Reminiscence (Illustrated) Joseph Christie; "Poor Dick" Illustrated J. A. Clippinger; "The Telephone"—Poem, James Walton Jackson; "Cabling across the Atlantic;" "Snags," Geo. H. Bliss; "How a Signal Service Man Lost his Sweetheart;" "A Centennial elegraphic Romance," W. J. Johnston; "By Telegraph"—Poem; "An Evening Reverie," W. P. Phillips; "What Came of being Caught in a Snow-storm," Ned Kent; "Into the Jaws of Death—a Telegraph Operator's Story," H. Van Hovenbergh; "Hamilton Doless," W. C. Cherry; "Scenes and Incidents in a Superintendent's Office," Tracy Barnes; "Our Night Car," Joseph Christie; "Lightning Anecdotes," "A. D. 1900" (Illustrated) J. J. Calahan; "The Quadruplex" (Illustrated) Joseph Christie; "Putting 'Ile' in the Batteries" (Illustrated) Joseph Christie; "A Ludicrous Mistake;" "The Carnival of Oshkosh—a Tragedy in three acts," T. C. Noble, Jr., (Chops). Illustrations: three full page pictures, drawn by J. J. Calahan.

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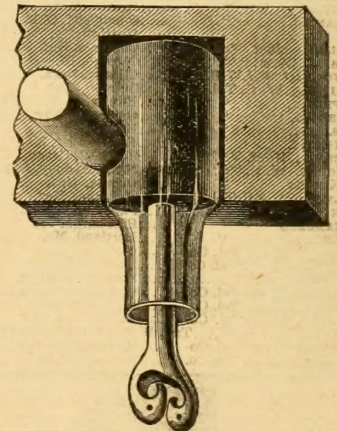
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THE OPERATOR

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Faith.

Within the fields with sunlight burning,
His scanty living daily earning,
A man the fragrant hay is turning
Into many a heap;
Slow are the eyes that watch his raking,
Or idly signs of weather taking,
The heart to impulse only waking,
The soul still dumb, asleep.

Beyond the fields with summer glowing,
I see a grave where flowers are growing,
Where grateful hands are always throwing
Bright laurels one by one.
A splendid heart at rest is lying,
A brave heart, victor in its trying,
That left humanity when dying
A great work grandly done.

Old Man Finn.

BY JOHN OAKUM.

I saw him, last summer, working a third-class wire in Boston office. In reply to my inquiry, the chief operator informed me that Finn had been given employment the day before. I met the old boy on the stairs later in the day, and he said, in a weak voice, "Yes, I am back here again, what there is left of me. My drinking days are over, and I am about over, too." He certainly looked bad, and I said to myself: "If consumption hasn't marked you for its own, your appearance belies you." My gaze went wandering away from him as he said sadly: "I can't telegraph very well any more. My hand shakes, and it is like sawing wood for me to work a wire—even a way wire." Then he left me and pursued his way up-stairs to the operating room. Old man Finn is not more than thirty-five years of age, but he has burned the candle at both ends, and his nervous system is fatally wrecked. He has fallen into a decline of late years, and there remains for him nothing, I fear, but the bitter dregs of existence.

Away back in the sixties, when I was a mere lad, endeavoring to master the myseries of telegraphy, Finn was in his prime. He was regarded as one of the finest telegraphers in the country, and at the time I first knew him he had just completed his twenty-first year. I doubt if many young men who have their way to make in the world, attain their majority under fairer auspices than he did. Intelligent, fine-looking, and the master of a profession which at that time was counted as one of the fine arts almost, he had, apparently, an enviable future before him. Indeed, if I had been told in those dear old days that I would eventually reach what seemed in my boyish eyes a pinnacle of glory—such as he occupied—I should have been more surprised and pleased than I could be now over any prospect of future prosperity short of a tight hold on Paradise.

Somebody has recently written a poem in which two tramps figure. One inquires on meeting the other if there is no shade tree near at hand, and the second replies: "Yes, a little further down the road." The writer elaborates this idea, and says we are all tramps, looking for a shade tree. In his view it is *always* farther down the road, and but few of us ever reach it. The idea is well enough, but the view is too pessimistic to please me. I believe, on the contrary, that we are rather like children straying through a house in which there are many rooms of exquisite loveliness, each more beautiful than the preceding one. Outside of the mansion we think we would be content if we could gain the hall, but once within we stray on and on with thoughts intent upon the possibilities which lie beyond, and little heeding the increasing beauty of our surroundings since we left the threshold. It is better that we should sometimes consider the point from which we started. The experiment is consoling, at all events, and makes us philosophic and more contented with

our social status. There are not many of us who have made the most of our opportunities who cannot say with the Christian of old: "Oh, God! I have much to be thankful for."

Old man Finn has not so much to be thankful for as many, and that he has thrown away his opportunities is, to my mind, the chief reason therefor. In the curt vernacular of Americans we often have the solution of a problem in one word. We hear of men in our own and other professions who have extraordinary abilities, kindly natures, and many traits of character calculated to endear them to their acquaintances. We are told, moreover, that they are, at present "down in the world," "utterly used up," etc., and when we inquire the cause, the answer comes with painful regularity in that direful monosyllable, "Rum." Old man Finn's failure in life is also susceptible of explanation by the mention of that short, sad word. I do not mean to preach a temperance sermon. In writing a sketch, however, of a man whom I have known and admired, and through whose kindly aid I was launched on a career which I hope I may be pardoned for considering a moderately useful one, it will be necessary to cite a few facts. These facts stand for themselves. If they preach anything I cannot help it.

How old memories come crowding upon me as I recall a lovely Sunday in a June so far away that I instinctively look in the mirror to see "if the young boy is getting to be an old boy," and "if the hair is growing thin on the old boy's head!" I was early at the office that morning and was copying, with the idea of becoming an operator, the Morse alphabet from Shaffner's Manual. So engrossed was I with my work, and the difficulty I experienced in fixing my chubby fingers around a pen so as to come within speaking distance of making the characters conform to those in Shaffner, that I did not notice that some one had entered. As I was desperately struggling with the letter "J" and inwardly bewailing my lack of expertness with the pen, a voice which startled me at first, but which I recognized at once as Finn's said: "Hop down off that stool, sonny, and I'll make you the alphabet." I quickly surrendered the task to the more experienced fingers of the new-comer, who had been looking over my shoulder, and took my place on the messenger's bench. Presently Finn handed me a blank on which the alphabet, numerals, and the punctuation points were given, and below them he had written in his own beautifully flowing chirography: "James Brady gave me his pretty black walnut box of quite small size." I bashfully expressed my thanks, but my heart was full enough of gratitude to have warranted something better than I said, had I been able to give utterance to my thoughts. After answering a call and taking several messages, Finn started me out, saying as I went to deliver them, "You can practice on that sentence when you have learned to make the letters. It contains all the characters in the alphabet." I have given that little story about Brady and the small black walnut box to many aspiring youngsters since then. I wonder if any of them ever prized it as highly as I did when it first became a part of my small stock of knowledge, and I wonder, too, if among that small band of youths, some of whom became operators, while others failed in that to succeed afterwards in other things, there is one who ever looked upon me as a half human, half divine personage, such as I regarded Finn. Probably not. But if there be one, I am a much-honored man, for nothing I can feel for a human being will ever excel my enthusiasm for my old telegraphic hero. Even though I have seen him often of late years under circumstances which, for the moment, bereft him of all his old-time glory, still I go on remembering him bright, dashing and handsome, and am thankful that I can. Old man Finn is the stern reality to nearly all who know him now, but to me he is an abstraction merely—a reality which goes out of my mind, giving place to my hero of yore the moment he leaves my presence.

Before he had gone far on his downward course I had become an operator, and worked by his side. I remember that in one of his exalted moods he took the color out of my existence, for a month or more, by a casual observation which I can never forget. Like many young operators I fancied, long before I had perfected myself in my business, that I had solved the problem. I spoke in his presence to that effect one day, and he said, with that charming bluntness which is sometimes the result of an indulgence in stimulant:

"You will make a decent operator, but you are, of course, a frightful stick now." It cut me like a knife, but I needed the lesson. Years afterwards, when I had progressed as far in the telegraphic art as nature intended I should ever go, I looked back on those earlier years and felt that Finn was right,

I had finally been taught the bitter lesson which the great Newton confessed to have learned, and I felt that the little knowledge we acquire is valuable chiefly as teaching us the density of our ignorance.

Finn's character had a humorous vein in it, withal. His ability as a "receiver" was the talk and wonder of the whole section in which he lived and wrought. He never broke, his work was accurate and his penmanship marvellous. One day an operator who copied press on the same wire visited us, and asked George how he managed to receive report day after day without ever breaking. Pointing to a Homeric contrivance consisting of two sounders placed on a shelf several feet away, and which did duty as a repeater for a station situated off the main line, Finn replied, dryly: "I do sometimes lose a word, but I have to watch the thing for breaks and I usually catch the truant word before it wiggles through there."

The time came when he could no longer hold the responsible position of night report operator, and he went West. From that time out, until recently, he has returned to me at intervals, varying from six months to two years. He plays the role of the "Friend of my Youth." He has invariably appeared without warning and uniformly in a state of impecuniosity. Sometimes he hailed from a New England town, where he had secured a month's "subbing," again he came from some obscure village, on a branch of the Erie Railroad, where he had been buried a year or two; anon he spoke of having just returned from Wyoming Territory or of having last worked in Texas. But his appearance, from whatever direction he came, always carried me back to the halcyon days of my youth, and invoked a vision of a brisk young man stepping out of his way to perform a kindly service for a round-faced country boy, come to the city to seek his fortune. That picture will always last. His wants have generally been modest, and I need scarcely add that his claims on me have never failed of recognition. If, in opening my purse, I have sometimes opened my lips and besought him to be a man, it is but common justice to him to say, that he has invariably promised to mend his ways. But he has steadily gone down hill, and has well nigh reached the bottom. I know better than scarcely any other man can know, how hard he has tried to retrace the steps taken, under social pressure, years ago, and which have led to his decadence, physically and intellectually. He has struggled against a cruel fate and has failed. It was with sincere sorrow that I saw him in Boston, pale, weak, and emaciated. I judge that the old enemy is conquered at last, but it is too late. A more merciless enemy, one on whom we may exhaust strength of will in vain, is obviously preying upon his shattered frame.

Some day we shall read of his death, and the casual acquaintance will say: "Drank himself into the consumption. Poor fellow! he deserved a better end," and will think no more about him. But when the writer reads that announcement, he will feel sad and grieved for many a day; for Finn was once kind to a boy whose catalogue of friends was limited enough then, and to whose eyes the tears will start unbidden when recurring Junes remind him that above the friend of his youth a mound rises on which the daisies bloom and the grass waves sadly in the summer air.—*Journal of the Telegraph.*

Letters from Europe.

Between you and I, London is a pretty large place. And yet you would be surprised to find how narrow and dirty many of the streets are of which we have often heard so much. There is nothing at all like the bustle and confusion I had expected. In fact I felt quite disappointed because I didn't lose myself half a dozen times, or get run over once or twice.

Of course I visited the Tower, the Bank of England, St. Paul's Cathedral, Westminster Abbey, the Houses of Parliament, National Gallery, General Post Office, British and South Kensington Museums, Hyde Park, Pall Mall, Regent Street, the Bridges, and so on in London, as well as Windsor Castle, Hampton Court, Richmond, Kew Gardens, etc., in the environs. London has many interesting sights for the tourist, and I did my best to see them.

The Tower of London is situated on the north bank of the Thames just beyond the eastern boundary of the city. It has been used as a fortress, a palace, and a prison, but is now only used as a fortress and arsenal, and the repository of the Regalia of the Crown. The Tower covers a surface of three acres, and is very strongly fortified. I saw the Bloody Tower, the traditional scene of the murder of Richard III's nephews. The Horse Armory, a

room 150 feet by 34, contains a large number of equestrian statues, many of them effigies of Kings of England, clothed in the armor of their respective periods, in some cases the identical suits worn by the originals. Among the rest are figures of Henry VIII. in a suit known to have belonged to that monarch, and James II. in armor actually worn by him. A narrow staircase and passage leads into Queen Elizabeth's Armory. On the north side of the room is a doorway leading into the dark cell, 10 feet by 8, in which Sir Walter Raleigh was confined for twelve years, and where he wrote his history of the world. I saw in the armory the thumb screw, the "scavenger's daughter," the rack, and other instruments of torture, as well as the original heading block, axe, and executioner's mask. In this room there is a fine figure of Elizabeth on horseback, and the walls and ceilings here and throughout the Tower are festooned in a decidedly tasteful manner with guns, swords, and other implements of warfare of different periods. I was in the Tower dungeon where so many illustrious prisoners were from time to time confined, and which they generally only left for the scene of their execution on Tower Hill, which I also visited. I was in the Jewel House, where, in a glass case, protected by an iron cage, the Crown Regalia are kept. They are of course, very handsome. The value of Queen Victoria's State Crown alone is \$5,000,000, and of the entire collection upward of \$15,000,000. The Queen's Crown consists of diamonds, pearls, rubies, sapphires and emeralds set in silver and gold. It weighs nearly 40 ounces. The lower part of the band, above the ermine border, consists of a row of 129 pearls, and the upper of a row of 112 pearls. In the center of the cross, which is composed of 75 brilliant diamonds, is the "inestimable sapphire," and in front of the Crown the heart-shaped ruby said to have been worn by the Black Prince. In the Crown are comprised 1 large ruby, 1 broad spread sapphire, 16 sapphires, 11 emeralds, 4 rubies, 1363 brilliant diamonds, 1273 rose diamonds, 147 table diamonds, 4 drop-shaped pearls, 273 pearls. Then there are St. Edward's crown of gold embellished with diamonds, rubies, etc.; the Prince of Wales', of pure gold without jewels, which is placed before the seat in the House of Lords, which is occupied by the heir apparent; the ancient Queen's Crown of gold set with diamonds and other jewels; Sir Edward's staff of beaten gold, 4 feet 7 inches long, surmounted by an orb said to contain a portion of the true cross. There are several other articles, but you would not be much interested in them, and we had better pass on to—

The Bank of England. This wonderful establishment, so well known all over the world, covers a quadrangular space of four acres, with a street on every side. The buildings are of one story, and have no windows toward any of the thoroughfares. About 900 clerks are employed, at a salary of from \$250 to \$6,000 a year. Bullion to the amount of from \$80,000,000 to \$100,000,000 is kept in the vaults as a reserve to meet any run that may be made on the bank. The gold is in bars, each weighing 16 lbs., and worth \$4,000; the silver in pigs and bars, or else in bags of dollars. About \$100,000,000 in bank notes are usually in circulation. The market price of £100 of Bank of England stock is about £228.

St. Paul's Cathedral, the pride of Londoners and admiration of strangers, is by far the finest building, in the Italian style, not only in London but in Great Britain. The great fire of 1666, which destroyed 13,000 houses, and 87 parish churches, left St. Paul's a heap of ruins. The work of rebuilding was intrusted to Sir Christopher Wren. There are 61 monuments in St. Paul's, 29 of them erected to military and 19 to naval heroes. Among the rest are monuments to Samuel Johnson, Admiral Napier, Sir John Moore, Bishop Herber, Lord Nelson, Duke of Wellington, John Howard, Sir C. Wren and others. In the vaults below lie the remains of many of our most celebrated painters, including Benjamin West, Sir Joshua Reynolds, and Sir Edwin Landseer.

In a chamber specially prepared for them, repose the remains of the great Duke of Wellington, in a large stone coffin weighing seventeen tons. The funeral car on which the body was drawn through the streets by twelve black horses, is also here. It was cast from the guns taken in the Duke's various actions, and is very massive and handsome. Close by, in the centre of the crypt, rest the remains of Nelson, the hero of Trafalgar. The Sarcophagus is of black marble, surmounted with a coronet and cushion, and was originally intended for the tomb of Cardinal Wolsey. Ascending to the bell tower, we find three bells. The larger, suspended forty feet from the floor, is ten feet in diameter, the metal

ten inches thick, and weighs 11,474 lbs. The tone is very fine. The hour is struck upon the bell by a hammer weighing 145 lbs. The quarters are struck on two smaller bells underneath. The clock has two faces, each 57 feet in circumference. The minute hand in each is 9 feet 8 inches long, and weighs 75 lbs.; the hour hand 5 feet 9, and weighs 44 lbs. The hour figures are 2 feet 2½ inches long. The pendulum is 16 feet long, and the weight at the bottom 180 lbs. It beats once every two seconds. Three-quarters of an hour is occupied every day in winding the clock. The Whispering Gallery is a most wonderful place. Fully as strange as the telephone. It is so constructed that the least whisper is heard at the other side, 140 feet distant, as distinctly as if uttered close to the ear. There is an excellent view of London from the upper or Golden Gallery, and a finer one still from the bell, though it is rather a test of endurance to reach the latter. The whole cost of the Cathedral—Sir Christopher Wren's salary as architect being only \$1,000 a year—was \$754,952. The length of the church is 690 feet, breadth 130, height of spire 520.

Westminster Abbey, one of the finest architectural boasts of London, is situated on the river Thames, close by the House of Parliament. The general aspect of this noble structure is grand in the extreme. For picturesque richness the inside surpasses the outside, but the exterior, with the adjacent buildings—crumbling and mutilated remnants of its abbatial grandeur—is an object of meditation if possible more interesting. Of course I visited the Poets' Corner, containing the ashes and monuments of such men as Thackeray, Garrick, Dickens, Goldsmith, Gay, Pope, Campbell, Macaulay, Milton, Dryden, etc. I shall not attempt to describe the feelings which a visit to this spot awakened, where, as Wordsworth says, "bubbles burst, and folly's dancing foam melts if it cross the threshold." The Abbey contains nearly five hundred monuments to illustrious persons, such as Dr. Watt, Sir Isaac Newton, Wilberforce, Shakspeare, etc. The latter is represented by a standing figure, leaning gracefully upon a pile of books, in front of which is a pendant scroll, inscribed with that sublime passage from the Tempest:

"The cloud-capt towers, the gorgeous palaces,
The solemn temples, the great globe itself,
Yea, all that it inherits, shall dissolve;
And like the baseless fabric of a vision,
Leave not a wreck behind!"

The instrument room of the London Central Telegraph Station is in the shape of the letter H, and a good idea of its size can hardly be given. Its length, however, is 60 yards, and there are 1400 operators employed—850 of them ladies. 40,000 commercial messages, and about half a million words of press are handled daily. Although so many ladies are employed here, the government is beginning to question whether it pays, and for the present no ladies are being received at the school of instruction. London is well supplied with branch offices, there being no fewer than 300 Metropolitan circuits, and 400 branch offices. There are 300 regular night men who work from 8 until 11 one night, and 8 p. m. until 9 a. m. the next. The other operators work 8 hours a day. There are 15 special wires for newspapers, and the *Times*, *Telegraph*, and I think the *Daily News*, have each cables to Paris, at an expense of from \$20,000 to \$25,000 a year each. Ladies' salaries commence at \$8 a week and increase to 30s. Boys start at 12s. a week, and rise to £160 a year. Three very handsome 50 horse-power engines are used in connection with the pneumatic tubes, of which there are 300, as well as for punching, etc. I saw the battery room, with its 24,000 cells—mostly Daniel—and 3 miles of shelving; nine battery men keep it in splendid order. The longest circuit, for sending time signals, has 130 Leclanche cells; the longest commercial circuit, 600 miles, 90 Daniel. I must cut this letter short here, as the mail closes in exactly five minutes. In my next I shall tell you something of Paris, and the telegraph in that gay city.

W. J. J.

Henry W. Grady, who is lecturing in the South, on the theme "Just Human," says he obtained that text from a telegraphic "bull." When Sunset Cox was about to reach Atlanta in his lecture tour, from every bill board and fence the words "Just Human" stared the passer by in the face as the title of the lecture. Upon Mr. Cox's arrival he noticed these words and asked what they meant. "Why that is your lecture," was the reply. "My lecture" cried Cox, "Why my lecture is on Irish humor." A mistake of the telegraph had transformed "Irish Humor" into "Just Human."

A Bunch of Violets.

"Sir, may I inquire why you are so extravagantly fond of violets? I always find a bunch on your table before I begin to think it is time for them."

The question and remarks were directed to the superintendent of a Western railroad, one morning in the early part of May.

"Yes, sir, you may inquire. I have a little leisure time just now, and will tell you how I came to love these little blue flowers so well, if you care to listen to a little of my past history:—"

When I was ten years old my father died. I had no brother or sister. My mother and I lived alone in a little cottage in the town of G., some twenty-five miles from here. My father left us a small income, and as our wants were few and our tastes simple, we managed to live very comfortably.

I do not think I was like other children. The sports which usually delight boys of my age were never enjoyed by me. I was a pale, quiet, sad child, and many were the predictions that I should never live to grow to a man. Day after day, when my few chores at home were done, I would wander away to the woods and fields alone, to lie on the grass for hours, and dream the wildest, most impossible-to-be-realized dreams that a vivid imagination could conjure up. Fairy tales and ghost stories were never failing charms to me. I was passionately fond of gathering wild flowers, and the first violets of spring were carried triumphantly home to mother, who would kiss me as she received them, and say:

"My precious Willie always remembers his mother."

Four years went by, and then my mother went to join my father, and I was left an orphan. I was fourteen years old, but no one would have taken me for more than ten, my figure was so small and slight. My only living relative was a half brother of my father, who lived at that time in the city. He took me to his home after mother was buried, and told me he was going to find something for me to do, for it was his opinion that "a boy fourteen years old ought to be earning his own livin'." He was a coarse, hard man, with a large family, and I shrank from coming in daily contact with him or his, but I had no home, and no other friends, so no choice was left me in the matter. My aunt and cousins did not mean to be unkind, but, like the husband and father, they were rude and uncouth, and I almost trembled when they addressed me in their loud voices, so different from the low tones of my mother.

For nearly two weeks my aunt kept me busy about the house, but at the end of that time Uncle James announced to me that he had secured the place of a message boy for me. The Western Union Telegraph Company was in want of a boy to help carry out messages, and my uncle had promised the manager that I should begin the next morning.

With a very frightened feeling I commenced my work. I soon learned the way about the city streets, but with what a heavy heart I traversed them! The office whose messages I assisted in delivering was filled with a set of gay and thoughtless young men, who laughed at my small figure and pale face, calling me a "wax doll," and so forth. Perhaps a boy who had been differently brought up might have failed to notice their raillery; but to me it was simply terrible. The other message boys were strong, healthy lads, with whom I found but little companionship. Lonely, sad and discouraged, with a heart nearly breaking over the loss of my mother, I wandered about, wishing God would take me where He had taken her. I could eat but very little, and soon my strength began to fail. Still I kept at work. My uncle noticed I was looking badly, but said I would "get toughened" pretty soon.

One day when I had been sent with a message, instead of going directly back to the office, I wandered down near the shore of the bay on which the city is situated. I sat down on the sand very near the water, and gazed into it sadly, thinking how miserable and unhappy I was. And then the thought came to me, Why not end all my sorrows by one plunge in this water? Who would there be to care? And was not my sweet mother up there, waiting for her boy? Only a little struggle, and all would be over. Very calm and clear and cool it looked, on that bright, sunny afternoon! I could imagine how white and ghastly my upturned face would look, floating out on the tide, but the thought had no terror for me.

"Yes," I said, "I will do so. Mother, I am coming."

I moved forward. But at that instant a sweet voice said: "Good afternoon, little boy. Are you enjoying this light breeze which comes from the water as much as I am, I wonder? You look pale and worn, poor child. Here, take a part of my violets. Father bought me this nice bunch this morning, and I could not bear to leave them at home when I came out to walk."

I thought she looked very like an angel, with her bright hair and deep blue eyes. I did not answer her, but my hand was raised involuntarily for the violets she held toward me. Noticing my uniform, she said:

"You are a message boy, aren't you? Well, I'm the operator at T— Station, but home now on a vacation. We ought to be acquainted, you see."

I tried to speak, but instead burst into tears, and sobs shook my light frame from head to foot.

"Why, my dear child, what can be the matter?" she asked in a troubled voice, as she came nearer, and drew my head down on her shoulder.

I cannot recall all she said to me, but before I left her I had told her all my story, and her tears had more than once mingled with mine as I talked. I had promised, too, to learn the Morse alphabet, and to practice steadily, that I might be able to speak with her over the wires, when she should go back to T—. I was invited to visit her also at her home on C. Street, and promised to do so.

How tenderly I handled that little bunch of violets! I carried them to my attic room, and placed them in water held by a broken tumbler I had begged of Aunt Sarah for that purpose. I kept them until they were a mere shriveled mass, and then I carried them down to the place where she had given them to me, and laid them tenderly into the water.

I was a different boy from the hour I met her. I began to take an interest in life, for had she not told me she should watch my course, and be disappointed if I did not become a brave and earnest worker?

Every spare moment I practiced, and in an incredibly short time became a fair operator. She helped and encouraged me, and many times in the long days did I find time to speak to my new friend. As time went on, I grew strong, and my cheeks became round and rosy, and I was happy. At last through Lena's influence—that was her name, Lena Lewis—I obtained a chance on the railroad as fireman. In two years I became engineer. I did my work faithfully. Soon after I became engineer, Lena was married, and a stranger took her office. She had never lost her interest in me. She was some four years older than I, and called me fondly, "her boy," and I was proud of the title.

For seven years I served as engineer, and then one of the conductors suddenly died, and I was the person chosen to fill his place. Eight years passed, and the road needed a superintendent to fill the place of the one lately resigned. Greatly to my surprise, I was considered the fittest person to fill this place. Perhaps I should have mentioned ere this that I married when I was twenty-five years old, a sweet, sensible young lady of this city, and my home has ever been the pleasantest and dearest place on earth to me. Lena Deane is still my friend, and often visits me and my family. Her husband is worthy of his wife, which is praise enough.

Sometimes in the hush of the Sabbath, when I can lay care aside for a time, my wife and I, together with our noble boy, Ralph, wander on the shore of the bay whose waters came so near being my grave, and as we think of her who saved me, many a heartfelt prayer is sent up to God for kind Lena Deane.

Benjamin West declared that a kiss made a painter of him, but I tell you, my friend, that a bunch of violets, given with a few kind words, made me a superintendent and a useful and happy man. Do you wonder I love the tiny blossoms? or that my boy has learned, that nothing will please his father more than a bunch of these simple but beautiful flowers?—*L. A. Churchill, in the Women's Journal.*

TELEGRAPHY IN EUROPE.—During 1875 the number of telegrams sent in Switzerland was equal to 77 per cent of the entire population. The corresponding population, during the same year, was 58 per cent. of the population in England; 36 in Belgium, 27 in Norway; 22 in Denmark; 19 in France and Germany; 12 in Austria and Hungary, and nearly 4 per cent. in Russia.—*Moniteur Indust., Belge, iv, 290.*

A Coil of Red Tape.

Red tape, or official formality, is no doubt a very good thing when not carried to extremes, but where such is the case, it is only another name for oppression, as many telegraphers know to their sorrow. It is also very annoying to the uninitiated, who, unless they are very careful, are apt to become entangled in its meshes. The experiences related in the following sketch are not exaggerated in the least, and may serve as a warning to some benighted wayfarer.

When these events occurred some six or seven years ago, I was what an American might term a "fresh Englishman" with a ruddy face, sandy hair, mutton chop whiskers, etc. A more complete description might include a short jacket, a cane, an eye-glass, and patent leather shoes. My father, the Hon. Josiah Knotchbull, was a prominent telegraph official in the service of Her Majesty, and I had been sent over to this "blasted" country as his representative to gain information regarding the management of American telegraphs. We know tolerably well how to conduct things at home, but almost fabulous stories had come over the Atlantic of the great speed attained in the manipulation of the "mystic key" in the United States, and the way business was "put through" generally, was said to be a "caution." It was therefore thought that a little insight into these matters would be advantageous. Letters of introduction were furnished, and upon the second day of my arrival in New York city, I was prepared to commence investigations. I accordingly called upon Mr. Gobble, the President of the Great Transcontinental Telegraph Company, and presented my credentials to that dignified-looking functionary. He took them in a very condescending manner, and placing them in one of the numerous pigeon holes at his right, remarked that he would look over them at leisure; that I should "step in" again.

I attempted to explain that I had merely called to make a few investigations—

Here I was suddenly cut short by Mr. Gobble, who bristled up like a porcupine, and said in a lofty tone, "My dear sir, we have hundreds, yes, thousands of investigations to look into; call to-morrow, and in the meantime I will examine your documents; good day, sir, good day."

I withdrew as hastily as possible, and wandered about the streets for the balance of the day, admiring the "newness" of everything. On the following day I again presented myself at the office of the Hon. Mr. Gobble, who, after parleying with one of his clerks, and probably learning my business for the first time, received me more graciously.

"Ah! Mr. Tutchbull, how do you do sir? Happy to see you, sir. Have a cigar?"

I corrected the honorable gentleman by stating that my name was Knotchbull—Launcelot Knotchbull, of London.

Mr. Gobble acknowledged his error, and after a conversation which lasted but a few minutes, informed me that I would receive a letter of introduction to Mr. Forker, the superintendent of the district; that I would find his office in the eighth flat.

Tendering my thanks I bowed myself out, and proceeded to the elevator. After viewing this shaky-looking affair once or twice as it ascended and descended, I concluded, much against my will, to enter it, but on doing so, I timidly inquired of the conductor whether it would be quite safe to go up. He turned about, probably to see if I was a stray lunatic or not, and being satisfied to the contrary, hastily slammed the door, pulled the brake, and then said with a squint: "Yes sir! only four men and three boys killed in it this year; safe as a house, sir!"

I made a move to get out, but was told to keep cool, which I did not, however, succeed in doing, the temperature being somewhere in the nineties. Upon reaching the eighth floor I was directed to the office of Mr. Forker, and finding that nervous little gentleman in, I handed him Mr. Gobble's note. After Mr. Forker had turned over the note three or four times, held it out at arm's length, glanced at it sideways, and with one eye shut, and having finally assured himself that the signature was not a forgery, he ordered a sickly-looking young man to conduct me to the ninth floor, where I would receive an introduction to Mr. Saltem, the manager, and be "shown around," as Mr. Forker said, with a bland smile.

The sickly young man started up the stairs on a "dog trot," and disappeared in the operating department somewhat in advance. I hastened after him as fast as my legs could carry me, and had just crossed the threshold when I unexpectedly found

myself in the clutches of a speckled, overgrown, red-haired youth, who was making strenuous efforts to put me outside the door. I was about to fetch him a clout with my walking stick, when the sickly young man returned and prevented such a dire catastrophe by at once escorting me to the desk of Mr. Saltem. I found that gentleman mounted on a sort of dais, like a schoolmaster, that he might see everything that was going on in the room. I was received kindly, and upon my complimenting Mr. Saltem on his elevated position, he remarked:

"No spitballs are thrown, and no peanuts can be chewed in this department without my knowledge. The penalty for such an offence is three week's suspension."

This was, no doubt, intended as a "point" for me, and I immediately made a note of it as Captain Cuttle would have done.

Mr. Saltem then took from his desk a roll which resembled a petition to Parliament, and informed me that it contained the rules for the government of the office. Upon examining this instrument, I was astonished to find that it rivaled the Talmud in profundity, and that it would suffice to govern a considerable nation. Mr. Saltem stated that each and every infraction of the rules contained in this document was punishable with suspension or dismissal.

I here made a note, remarking that if such a code could be employed to advantage in a free country, what would it not accomplish in England, where the people were ruled with an iron hand, comparatively speaking.

Mr. Saltem next conducted me to the desk of an antiquated individual whom he addressed as Jerry, and who, he said, was the "boss" operator of America; he could receive seventy-five words a minute, if necessary, and was never known to break. I was absolutely amazed at this assertion, and justly so, because the operators in England were in the habit of using up a key about every six months by breaking alone. We next visited the "error clerk," who was almost buried in long, brown envelopes, covered with writing both outside and inside. Mr. Saltem said many errors occurred daily, and that these envelopes all contained claims for damages; very few of them, however, were paid. The errors were mostly legitimate, and they had the law on their side.

I was thunderstruck, but said nothing. I was too full for utterance.

The book-keeping department was next on the programme, and having ascended to the tenth floor, I was compelled to go through the ordeal of another introduction. Mr. Poster, the chief clerk, was a musty-looking man, though rather inclined to be jolly. His assistants all occupied old, rickety desks immediately under the roof, and bore more resemblance to automatons than to human beings. An error sheet was brought forth, and Mr. Saltem proceeded with his explanation. "This," said he, "is an error of one cent discovered in the account of the Bungtown office some three months ago. The rules of this company require that all accounts be properly adjusted, and although sixty-four cents have been expended on this account for postage, stationary, etc., it still remains unsettled."

Upon inquiring why such rules were enforced, Mr. Saltem answered: "Oh! sir, we do all this for the benefit of the service."

This announcement entirely overwhelmed me, and after incoherently muttering a few thanks I departed. STANLEY.

LIGHTNING FLASHES.—A volume of choice telegraphic literature, teeming with humor, fun, wit and wisdom. Its pages are filled with contributions from all the principal writers in the ranks of telegraphic literature, and several well known outsiders. The book is graphically illustrated, on tinted plate paper, and presents many interesting incidents of life to those unacquainted with the duties of telegraph operators. It also contains excellent cuts and sketches of Professor Morse and other prominent men who have been connected with the theory and practice of telegraphing. It is a work of valuable information, spiced with startling and humorous incidents of life, and is the second book published giving telegraphy a literature of its own. The first was very successful, and we should judge that this one will be fully appreciated by the reading public. Every person who has the fortune to see this volume, will desire to possess it. The field for this kind of literature is much larger and more productive than we realized, and we shall look forward for fresh gatherings of the rich harvest it seemingly affords for charming summer reading. —*N. Y. Hebrew Leader*

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

W. J. JOHNSTON, - - - Publisher.

September 1st, 1877.

DURING MR. JOHNSTON'S ABSENCE IN EUROPE correspondents will please address all matter for the literary department of the paper, personals, items of news, etc., to Joseph Christie, P. O. Box 2675, Philadelphia, Pa.

Subscriptions, orders for books, etc., or in connection with THE OPERATOR Purchasing Agency, and all business communications generally, as well as New York City items, to W. J. Johnston, Publisher, P. O. Box 3332, New York, as usual, to whom Post Office orders, drafts, etc., are to be made payable.

READ "Old Man Finn," on third page.

THE *American Art Journal* pays a well-deserved compliment to our cultured correspondent, "Justus," by copying his article, "Genius is Prolonged Patience," from THE OPERATOR of August 15th.

A NEW discovery in telegraphy is said to have been made by a Belgian officer, by which communication will be rendered quite possible for the inhabitants of a besieged town after all wires are cut.

MR. W. J. JOHNSTON, the publisher of THE OPERATOR, whose interesting letters from Europe have appeared in this journal during the summer, will sail from Liverpool for home September 6th. He may be expected in New York about the 17th inst.

THE Western Union and Atlantic and Pacific Telegraph Companies, at a meeting of their representatives, August 20th, agreed to an arrangement by which the Western Union gets control of a large amount of A. and P. stock, and, further, that their earnings shall be "pooled," in the proportion of seven-eighths to Western Union, and one-eighth to Atlantic and Pacific.

Now that there is a prospect of making some profit in telegraph investments, would it not be a good idea for the A. and P. to make a note of the names of those operators from whom forced loans were exacted, with a view to paying them back? Their executive officers acted from motives of what they considered to be their duty, and, although that course was, according to our view, an oppressive one, we accord to their action all the respect which is due to any faithful performance of official duty. We expect no less consideration from them, and as that company will, by the new arrangement, effect a clear saving in their current expenses of half a million dollars per annum, there is no reason why some return should not be made to those operators from whose scanty pay deductions have recently been made. If the managers once make up their minds to it, there are many graceful and generous ways of performing this little act of common justice.

History Once More Repeats Itself.

Hiram Sibley's "Western Union," the stock of which in 1861 was bought for 30 cents, has just surprised the country by extinguishing another of its rivals, and, more so, by the colossal monetary interests involved. At the late conference, referred to in another paragraph, 71,500 shares of Atlantic and Pacific stock were transferred to the Western Union, the consideration being one-half cash, and one-half W. U. stock valued at 72. As the W. U. thus secures a clear field, and the A. and P. "backers" get a good price for their shares, viz: 25 (which is really 5 per cent. more than the actual amount paid up), there is reason to suppose that both parties are well satisfied with their bargain. It is stipulated further that they are to continue as separate organizations for a minimum period of twenty years, subject to certain restrictions and rules of government, and that their differences, if any, shall be settled by arbitration. There is, henceforth, to be a uniform tariff, and no undercutting; the A. and P. agrees to go on and complete all its extensions where the W. U. have no lines in operation, and that the gross earnings shall be deposited in one exchequer, from which each company shall receive its stipulated proportion, the same being determined by the comparative earnings of the two contracting companies during the past few months. This joint-purse agreement—there is a tinge of sarcasm in the official use of the gambling phrase "pooling"—is no more nor less than a determination on the part of our directors that the public shall hereafter pay for its own telegraphing, and that the expense shall not be defrayed partially by investors in our stock, nor by the employes.

The arrangement is not, by any means, what we could have wished for, since there was ample room and work enough for two distinct companies, if proper rates were asked; but it is far better than the late absurd rivalry, with its consequent high-pressure excitement, uncertainty, dead losses and exasperating reductions. Numerous offices in the principal cities will be abandoned, and a number of operators thrown out of employment thereby. Thus far the change is unfortunate, though we know that, in every case, the selections will be very carefully made, and if an individual operator here and there is inconvenienced for a time, it will result in his ultimate good.

THE OPERATOR has never faltered in its conviction that some such agreement would be the upshot of the late ridiculous competition, our only surprise being that the step was not taken months ago. It is consistent with the whole history of Western Union. Since its organization, 25 years ago, with a capital of only \$36,000, the Western Union Company has grown to be the largest, the most amalgamated, and probably the best managed telegraph system in the world. The remains of its rivals have been the fertilizers of its growth, and no combination, how strong soever it may at first have been, has long been able to keep up to its pace. Two wires running between Buffalo and Louisville, and the New Orleans and Ohio Telegraph Company, were among the first to strike their colors to Western Union. Since then its record has been merely a rehearsal of the first act, and a steady, onward march. The Speed line, running from Buffalo to Indianapolis, and to way stations, lived and died as an "opposition." The New York and Buffalo line was wrecked in

the maelstrom of competition, and so was the Atlantic and Ohio, running between Philadelphia and Pittsburgh. The old United States line, the Bankers and Brokers, the staunch old American, and a host of short local lines, have all gone dismally to that bourne whence no low-tariff company returns. The Pacific and Atlantic made a comparatively good stand but suddenly disappeared in the inevitable gulf. To-day we record the virtual dissolution of the Atlantic and Pacific, although that company maintains nominally its independence.

It is gratifying to us as operators to join cordially in a measure which we are confident will avert the difficulties which at one time overhung all of us. We found fault, justly, when we considered that they were acting outside of the time-honored gospel of the financial world; but, now that they are showing their appreciation of the dangers which beset us, we should allow no perverse desires of our own, or partial disappointments, to embarrass them. On the contrary, we should do all in our power to aid them. It is true that while we may sow the seed we cannot make it grow, but we can do a good deal, collectively, in the way of watering and weeding—in avoiding extravagance in the use of material, in losing no time, in expediting the business, and in saving wherever a saving can be effected. We should bear in mind, always, that many of the shareholders are not any richer than the average operator, and less capable of reviving a broken fortune. Many of them are helpless widows and orphans, seamstresses and day laborers who have their little board invested, and they look for dividend day just as anxiously as we do for the "first" or the "fifteenth," with all that that implies. If the dividend fails them, they are as much embarrassed as we would be if the company "passed" our salaries once in a while.

A slight reflection on these points will convince our fellow craftsmen of the importance of rendering every assistance to our superior officers, and of cultivating that harmonious feeling of mutual confidence without which their labors would be much more difficult. We have every indication of a bright future; the two companies, even with the low rates, have jointly earned in the past six months ten million five hundred thousand dollars, and the business of the entire country is now more promising than at any time since 1873; expenses, which hitherto, owing to the number of unnecessary offices, etc., have approximated 70 per cent. of the earnings, will now be reduced to less than 50 per cent., so that there is no valid reason why 8 per cent. per annum, as an enduring income, should not be paid to the shareholders, together with good salaries to good operators—two elements which seem to have been lost sight of lately. The companies have now, and for the matter of that always have had, the traffic sufficient to keep them from financial embarrassment, and, if a paying rate is now charged, they will soon have the revenue to employ not only the number of men that they need, but, also, men of the proper standard at adequate salaries.

An ounce of prevention is worth a pound of cure, and if they will recognize the wisdom of this, and commence, at the outset, the necessary reforms in some of the details of telegraph management—being mindful of the needs of commerce, charging only a moderate tariff, but one fully sufficient to cover all expenses, and reduce

it as circumstances may warrant—they will, at once, secure themselves against any future opposition, command a higher standard of merit and efficiency in their own ranks, and gain greater confidence and more liberal support from the public at large.

Something for Our Historians.

Junius L. Clemmons, of Louisville, Ky., writes to the Hickory, N. C., *Piedmont Press*, claiming that he is the inventor of the Morse telegraph. He says that while a student at Randolph Macon College, in 1833, he made all the necessary drawings of a plan substantially the same as that put in operation by Morse four years subsequently. In this year (1833), he sent his drawings, he says, to Mr. Page, the Commissioner of Patents at Washington, who never replied, nor in any way acknowledged their receipt. Not being enthusiastic over the matter, and receiving no encouragement from his friends, Mr. Clemmons neglected the matter entirely. Four years afterward, he was astonished to see a notice in a newspaper that Page, Morse, Smith, and Kendall were about to obtain a patent and operate Morse's Electric Telegraph. Clemmons now says that he went to Washington and accused Page of using his drawings, and that the latter admitted having received them. This correspondence, Clemmons says, is to be found in the files of the *Globe* of that day.

We are all aware that eminent men in England, France, and Germany, had made considerable research in electric telegraphy during the years 1834-5-6, before Morse had made his invention publicly known, and if Mr. Clemmons can substantiate his claim he ought to receive more credit among us than he does. If he is laboring under a delusion, some one ought to set him right.

We reprint from the *Journal of the Telegraph*, a sketch contributed to that paper by the prolific John Oakum. The *Journal* in publishing it, says editorially:

"We are indebted to Mr. Walter P. Phillips (John Oakum), for an original sketch, which will be found on our first page. Mr. Phillips has won a deservedly excellent reputation for ability as a writer, and this last production is one of the best which he has yet produced."

This realistic story will be found well worthy of careful reading, for, independently of the author's usual good style, the story is very striking, since few men who have had their way to make in the world, but somewhere, sometime, have encountered their "Old Man Finn."

In our next issue we shall print another excellent sketch by this popular author. It is called "Narcissa," and will be looked forward to with much interest. Mr. Phillips writes us that he is at work on a lecture on "Love after Marriage," which he will deliver this coming winter.

ONE of our subscribers at Rochester, N. Y., complains of the injustice of a paragraph in our local correspondence, ascribing to him the sale of patent soap, warranted to wash shipwrecked mariners ashore. He has been an operator for over a quarter of a century, and whatever he may have done as a younger man, is not true of him now. He is a good, steady and faithful telegrapher, in actual service now, and we are just as willing as he is to let by-gones be by-gones.

We might seize upon this occasion to admonish

some of our correspondents with regard to their personal communications. There are men who are fond of this kind of notoriety, and to such we should never hesitate to extend the gratification of a thrilling episode or a withering epigram, since either one suits them as well as the other; but, to others, who are too modest to covet even a passing mention, the point of these "funny" stories strikes like the swift, sharp cut of a cavalry sabre. We do not desire our correspondents to avoid altogether such enlivening subjects, but merely to select their heroes in such a manner as not to wound the feelings of any one. We believe in sarcasm, and ridicule too, when it is applied in proper doses, and to the deserving quarter, but it would be well for our matadors to always flourish their sabres where there is some one to fight, and to pass completely around that numerous silent crowd whom people say have "seen better days." The memory of times which they have, perhaps, outlived is galling enough without having its bitterness enhanced by the blundering "wit" of their thoughtless neighbors. We who have the courage to shake the red mantle in front of a vicious young bull, should have the grace to bow our heads in reverend sympathy for our poor, unfortunate comrades who have, even when the worst is said, done, at least, their best, in buffeting the storms and battles of a long life.

Still Another Plug Factory.

"THE HARTFORD COMMERCIAL COLLEGE."

"This school will hereafter be known as the Hartford Commercial College, and in addition to the business and special branches now taught, a department for TELEGRAPHY will soon be opened under the charge of Manager Hubbell of the Western Union Telegraph Company."

"TELEGRAPHY.—The Telegraph Department is under the charge of Mr. G. B. Hubbell, manager of the Western Union Telegraph Company, and is fully equipped with the best instruments. Wires connect the school with the main office on Central Row. Students are rapidly and thoroughly qualified, and on completing the course are recommended to good paying situations."

These extracts are taken from a bright and glowing prospectus issued by the "principal" of a so-called "Commercial College" in Hartford, Conn.

Notwithstanding the frequent exposition of these swindles in the columns of THE OPERATOR, they continue to spring up perennially, like noxious weeds.

It would be interesting to know what has directed the attention of office managers toward teaching telegraphy. Have their salaries been reduced to a point where some outside source of revenue is necessary? Or has a general order been issued, instructing managers to add as many workers as possible to an already crowded field?

If the outside public would take two facts to heart, there would be much trouble and useless expenditure saved. First, there are already too many operators in the country; the six hundred answers to the Atlantic and Pacific Company's advertisement sufficiently prove that. Secondly, telegraphy cannot be learned in a school, like geography or arithmetic. In order to obtain a situation as a telegraph operator, something more than the ability to painfully struggle through a message is required, and this knowledge cannot be acquired in any "telegraph college."

Managers and others of our profession would do well to remember that this slight addition to their income is purchased at the expense of the respect of their associates, for which the remuneration received can be no equivalent.

After a telegraph pole had fallen on a Savannah negro's head, he threw up his hands and shouted, "Don't hit me again wid yer club, Mr. Pliceman. It wasn't me dat stole der chickens. It was Deacon Henry." Then he looked, saw what hit him, and walked off, saying, "Golly I see in luck dis mornin'. I 'spected dat de pliceman had me shuah dat time."

Themes for the Thoughtful.

To have ideas is to gather flowers. To think is to weave them into garlands.

A thousand evils do afflict that man who hath to himself an idle and unprofitable carcass.

Avoid evil-doers; in such a society the virtuous come to be almost ashamed of themselves.

Poverty wants much, avarice everything. Money is a useful servant, but a most tyrannical master.

The first ingredient in conversation is truth; the next, good sense; the third, good humor; the last, wit.

We touch not a wire but it vibrates in eternity, and there is not a voice that reports not at the throne of heaven.

The man whose sole ambition is to win applause of the world, is sure to be disappointed, whether he wins or loses.

Avoid the proud and arrogant, but without letting them perceive it. Otherwise you provoke dangerous enemies.

Through woe we are taught to reflect, and we gather the honey of worldly-wisdom not from flowers, but from thorns.

Those who are extremely civil, are seldom sociable; because company gives them more trouble than entertainment.

Let it be your chief object in life to acquire a sincere friend; friendly sympathy heightens every joy and softens every pain.

No man is so foolish but he may give good counsel at a time; no man so wise but he may err, if he takes no counsel but his own.

Truth never need be in a hurry, but a lie must keep all the time on the jump; a lazy lie soon tires itself out, and ends in confusion.

It was an American who said, "We use two stones to grind the flour of liberty—the lower is the school, the upper one is the Bible."

Children that are remarkable for what they know at five years old, are generally more remarkable at twenty-five for what they don't know.

The blessing of a house is piety; the honor of a house is hospitality; the ornament of a house is cleanliness; the happiness of a house is contentment.

The highest point outward things can bring us to is the contentment of the mind, with which no estate can be poor, without which all estates will be miserable.

Never seek to be intrusted with your friend's secret; for no matter how faithfully you may keep it, you may be liable in a thousand contingencies to the suspicion of having betrayed it.

Most persons are particularly spiteful against those foibles in others which they themselves have. They remind us of a monkey scratching and grinning at the mimic monkey in the glass.

When there is no recreation or business for thee abroad, thou mayest then have a company of honest old fellows, in leathern jackets, in thy study, which may find thee excellent divertisement at home.

Philosophers did wisely when they told us to cultivate our reason rather than our feelings, for reason reconciles us to the daily things of existence; our feelings teach us to yearn after the far, the difficult, the unseen.

If ever household affections and loves are graceful things, they are graceful in the poor. The ties that bind the wealthy and the proud to home may be forged on earth, but those that link the poor man to his humble hearth is of the pure metal, and bears the stamp of heaven.

Riches oftentimes, if nobody takes them away, make to themselves wings and fly away; and, truly, many a time the undue sparing of them is but letting their wings grow, which makes them ready to fly away, and the contributing a part of them to do good only clips their wings a little, and makes them stay longer with their owner.

The man whose bosom neither riches nor luxury nor grandeur can render happy, may, with a book in his hand, forget all his torments under the friendly shade of every tree, and experience pleasures as infinite as they are varied, as pure as they are lasting, and as compatible with every public duty as they are contributory to his private happiness.

Scientific Department.

[This department is under the charge of Mr. H. Van Hovenbergh, 145 Broadway, to whom all communications relating thereto should be addressed. Mr. Van Hovenbergh will cheerfully answer here any queries pertaining to electricity, magnetism, or kindred subjects.]

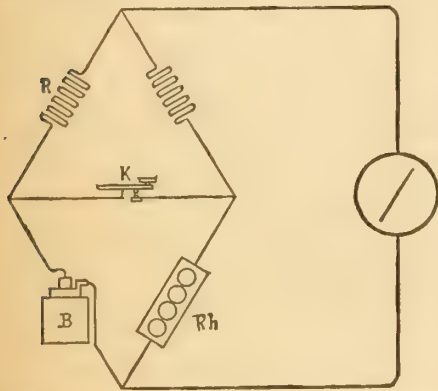
ELECTRICAL MEASUREMENT.

VII.

MANCIE'S METHOD.

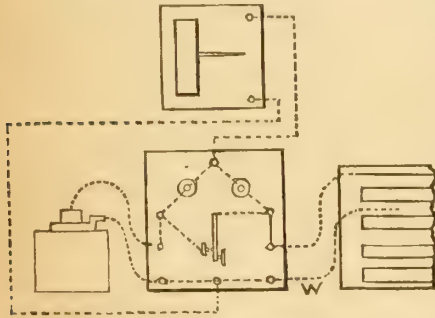
Of the many different ways of ascertaining the internal resistance of batteries, that termed "Mance's method" is the one best adapted to the apparatus described in the preceding articles. It is simple and convenient to use, and the results obtained are invariably satisfactory.

This diagram illustrates the principles involved in the method:



The battery, B, takes the place of the object to be measured, as shown in the illustration of the Wheatstone Balance; the galvanometer takes the place of the battery, and a key is placed in the cross or Bridge wire. With all of the coils in the rheostat, Rh, cut out, so as to offer no resistance to the current, the galvanometer needle will be considerably deflected. When the key, K, is depressed the needle will fall to zero, as the battery will be short circuited. Resistance should then be introduced at Rh, until the galvanometer is not effected by the opening and closing of the key. When that is accomplished, the resistance found will be that of the battery.

The following diagram shows the apparatus previously described, arranged to test the resistance of a cell of battery by "Mance's Method."



The needle will be deflected as soon as the connections are made, and may be brought to zero, (that is, with the needle pointing toward the north,) by depressing the key. Then, by adjusting the resistance with the wire, W, a point can be reached where the opening and closing of the key does not affect the galvanometer. When this is the case, the resistance of the cell has been found.

In all of these tests the galvanometer should be placed so that both the coil and the needle (not the pointer, that should point east), range north and south.

The wire used for making connections should always be of copper, well covered, and as thick and heavy as possible. The ends should be firmly secured in their various places, and no loose or shaky connections be made. The greatest care should always be exercised in making tests. Should the results be unsatisfactory, a close search will always show something to be wrong—some mistake in con-

necting up the apparatus, or, mayhap, a faulty connection.

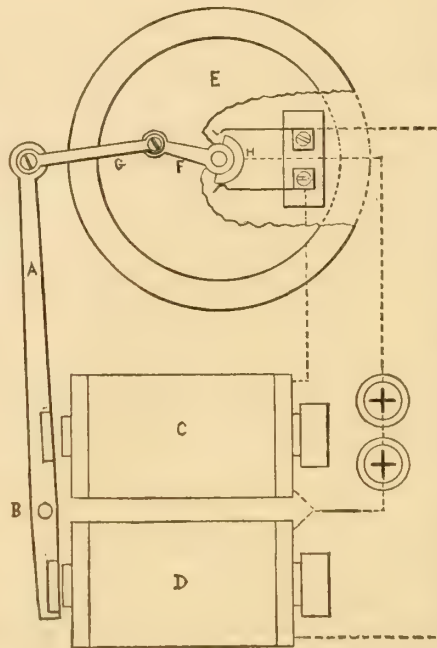
With these last directions, this series of articles closes.

The galvanometer described in the second article may be used, however, for a number of other purposes, not the least interesting of which is the observation of currents of electricity produced by induction.

The next article, and perhaps two or three following, will be devoted to this subject.

ELECTRO MECHANICAL MOVEMENTS.

No. 6.



The above movement shows the principle of the earliest electric engines used. The lever, A, pivoted at the point, B, is acted upon alternately by the magnets C and D. Rotary motion is communicated to the balance-wheel, E, by means of the crank, F, and link, G. The current is connected to the magnets by the segment, H, which is fastened on the same shaft as the crank and balance wheel. This engine will run in either direction, as started, until the battery is removed or gives out.

Though very old, this arrangement is an excellent one. It is a question whether an engine built upon this plan does not produce a greater amount of power with a given battery than the rotary ones now used so much.

ERRATA. In Art. 3, the words "Brown and Sharp gauge" should be "Birmingham wire gauge."

In the first diagram of Art. 6, a dotted line should be drawn from the anvil of the key to the binding post directly underneath.

IRON TELEGRAPH POLES.—Experiments are being made to determine the applicability and economy of iron telegraph poles on the Berlin-Königs-Wusterhausen line along the Gorlitz railroad. The poles are in the form of double T irons, and are placed upon foundations of granite which are built on the earth. The insulators and their supports are fastened to iron cross pieces.—*D. A. Polytech., Zig., v. 309.*

ELECTRIC ILLUMINATION AT SEA.—The English iron-clad "Alexandra," supposed to be the finest afloat, has an electric lamp attached to its foremast. The cost of lamp and the necessary electric apparatus was £1,000, a sum which seems enormous at first, but does not appear so very extravagant when we reflect that it is supposed to protect a ship the insurance of which amounts to £600,000. The electric light serves two purposes, first, as a beacon light to point out dangerous reefs of rock or sand, and second, as a protection against torpedo boats. The light is thrown out from all sides of the lamp, and illuminates such a large surface of the water that it would be almost impossible for a torpedo

boat to approach without detection; especially as the light falling upon the smoke would suffer such refraction as to make the boat's existence even more apparent than if the light had but fallen on its surface. This latter function of the electric light is very important, since ships have heretofore found no protection against the attacks of the torpedo boat.—*Les Mondes per D. A. Polytech., Zig., v. 297.*

CORRESPONDENCE.

F. A. P.—"What preparation is used, and how applied, to put a durable polish on a Telegraph key, or other brass instruments which have become stained from use?"

Ans.—A lacquer, or varnish, is made for the purpose, which may be procured of almost any dealer in varnishes. The article should be brightly polished first by being rubbed with fine emery paper (always in the same direction), then gently heated, and the lacquer evenly applied with a brush.

H. M. M.—"Will you please let me know if you can get a Telephone for me, and at what price?"

Ans.—A set of Prof. Bell's telephones (four) can be procured at a rental of twenty-five dollars per year, through the editor of *THE OPERATOR*. They cannot be purchased. 2. "Can you give me a description, so that I can make one?" **Ans.**—A description might be easily given, but we would not advise you to make them. By the law of the land, any one may make a patented article, but after the first successful experiment, any further use of it becomes an infringement, and renders the maker and owner liable to prosecution.

"Chips," of Wisconsin.—The arrangement you describe is not new, as one has been in successful operation in this city for more than a year. Will give you particulars by mail, as desired, on receipt of your full address.

X. E. should give his address. The information asked for will be given immediately upon its receipt.

New York's Summer Resort.

New York, Aug. 21st.

It is a curious commentary on our laws, State and National, that such a combination for monopoly as that just ratified between the two companies should be able to exist. While the arguments against this "pool" are many and sound, when the views of the general public are taken into consideration, still, looking at the matter from the operator's standpoint it seems to me that great benefits must accrue to the manipulator and his clerical confreres. Dividends must be earned somehow—either by a profitable system of tariffs, or the application of the executive pruning knife to the well earned stipend of the employee. But when a paying rate for a ten word message shall have obtained, the necessity for reductions in expenses will cease, and we shall hear little or nothing about sliding scales. No doubt this subject will be ably discussed in the editorial columns of *THE OPERATOR*, so, perhaps, it will be best to relegate it to the editor. There is very little gossip from this city to record, except that there seems to be a growing inclination among some of our old friends to become Benedictines. Of course everybody has heard that Ed. Leslie recently changed his condition and entered the ranks of matrimony, and there are others of whom it will shortly be necessary to make mention. Marriage is a high estate, and more married men, if they are of the proper sort, cannot fail to improve the morale of the office.

Coney Island seems now to have become the resort for the gentlemen from 197. Almost any evening of the week one may see a familiar face while strolling on the beach, or waiting at the Court of Gambrius, at Cabel's. Wonderful changes have taken place on that narrow strip of land during the last few years. In the past, on disembarking from the boat, one was greeted by a number of rambling, rough board buildings, yclept hotels, where about the only thing to be obtained was indigestion, in the shape of a clam bake, peddled out at Delmonico prices. Now real hotels have sprung up, houses at which the *menu* is, perhaps, inferior to none, and at which a dollar brings its full value. The accommodations for carrying guests and seaside strollers from Brooklyn to the "Island" are all that can be wished for. The distance from Flatbush Avenue is said to be over ten miles, but the energetic little locomotives, with their Summer cars attached, make the run in something like a quarter of an hour.

When within a few miles of the beach the scene, at night especially, becomes rather impressive. One may see the dancing, bright-colored lights hanging around all the hotels, and strung along the promenades, and as the train dashes nearer and nearer, the roar of the surf, mingled with the busy hum of several thousand tongues, makes one eager to be there at a stride, that none of the fun and frolic may be lost. After leaving the cars, the first point of interest is Cabel's, and from the balconies of this hotel a fine view of the beach may be had, and if you be so minded, a half hour may be spent enjoying the very fine music which is furnished by a band of some 40 pieces. Further on Feltman's hotel is reached. Here a hop is given every night, and consequently the mirth rules fast and furious. There are many other interesting sights too numerous to mention in a letter of this kind, but every operator, when visiting the metropolis, should, without fail, visit Coney Island, and enjoy what has been so justly called New York's Poor Man's Paradise.

Telegrapher's Excursion.

BALTIMORE, MD., Aug., 1877.

The telegraphers of this city, encouraged by the success of their Washington brethren, determined to give a grand moonlight excursion. To such an end some of the most energetic young men of the W. U. and A. and P. Tel. Co.'s formed themselves into an association for this purpose, choosing as their Prest. Mr. A. Grape, of the W. U., and Mr. Hayden Gentry, Sec'y. The mere announcement of two such worthy members of the craft as leaders in the undertaking, was, in itself, enough to insure the success which the excursion attained.

The palace steamer, "Sam'l J. Pentz," one of the largest and handsomest excursion steamers in the harbor, was secured for the occasion, neither time nor money being spared to make it the grandest and most select affair of the season. The services of the well known Fort McHenry Band were secured to enliven the occasion. There was also on board two grand square pianos at the disposal of the excursionists, which were a source of much pleasure to many. Every arrangement had been made for the pleasure and entertainment of their friends and guests.

The steamer left her moorings at Light Street wharf promptly at 7 P. M., August 9th, 1877, the immense crowd on the wharf cheering lustily as the band commenced to play "The Star Spangled Banner."

On the sail down to Annapolis and Holly Grove (which was delightful), everything passed off to the infinite pleasure of the entire party. During the interval of dancing and choice selections by the band, the company were regaled with some fine singing, Mr. Geo. Bunting, of Baltimore A. & P. office, rendering, in a rich baritone voice, some beautiful ballads. Especially noteworthy was his singing of "The Stolen Child." Mr. H. Robinson, of Washington, also contributed some choice music. Harry McKeldin, also of Washington, favored the company with some very fine singing. His rendition of "Dublin Bay," in a deep bass voice, was a marked feature of the occasion. Mr. R. W. Bender, of Washington, and Malcom Hart, of Baltimore, presided at the piano alternately, and did much toward entertaining the company.

On reaching Holly Grove, the most delightful summer resort on the Chesapeake Bay, the party disembarked, and two hours were spent in dancing, the arrangements being under the supervision of Mr. I. Hallenstein, of the W. U. office.

After a most enjoyable evening, the excursionists reached Baltimore at 1.30 A. M., all very much pleased. Many expressed a wish that a repetition may be made before the close of the season.

Of the very many whom we met, might be mentioned the names of Thos. Bishop and wife, James Holland and wife (of Washington), Chas. J. McAlcese (ex-operator and now a distinguished member of the Maryland Legislature), Sam. Sprigg, T. G. Adams, and many others from the W. U., A. & P. & R. R. lines. Among the Washington delegation, of which there was some 20 or more, we noticed particularly Messrs. Sinnott, McCarthy (L. B.), McKeldin, Bender, King, Motherhead, Nicholson, Robinson, Hutchinson, Stewart, Johnson, Drill, Trailer, and others.

The able manner in which everything was conducted is worthy of special notice, and reflects credit to the gentlemen composing the committee, more especially to Messrs. Grape, Barclay, Gentry, and Hallenstein, who labored unceasingly for the success of the undertaking.

EXCURSIONIST.

Echoes from 197.

Joe Muchmore is working at 791 Broadway.

Chief operator D. R. Downer, has been spending a week at Ocean Grove.

Mr. Van Orden has returned from a month's vacation in Massachusetts.

Chief Bogart has been spending a week's vacation at Mauch Chunk, Pa.

Chief operator Tobin will spend two weeks in the Catskills, commencing October first.

Superintendent Brenner, of Augusta, and Manager Griffin, of Savannah, Ga., are in town.

Bob Lown paid us a visit August 13th. He is in business with his brother at Poughkeepsie, N. Y.

The Misses Skyes and Curran, who have been rustivating in New Jersey during the past month, returned last week.

Mr. Weller finds it necessary to carry a six shooter—he says his wife is residing in the country, and he is keeping bachelor's hall in a lonely part of Brooklyn.

WATER, as an automatic motive force, is much more powerful than electricity. That is why some excitable people prefer canal boats to the Automatic system for sending rush messages.

A letter from George Cummings was received a fortnight since, dated from the Kirkwood Insane Asylum, Philadelphia. He says: "I am steadily improving, am treated with every kindness, and hope to be with you all again this fall."

In our last issue we erroneously stated that George Walcott was not singing at present. We since learn that he is the basso of the church of St. John the Baptist, on Lexington Avenue, and receives a salary of six hundred dollars per year.

Brooks keeps in his desk a placard bearing the familiar legend, "Gentlemen, I have no soap," which he produces with unflinching regularity three times a week. The neglect of the company in furnishing a sufficient quantity of soap, is a source of great annoyance to our good looking time keeper.

Mr. Taylor, of Springfield, who has been subbing the past fortnight for James Gainer, returned home on the latter's arrival, August 15th. Though coming among us an entire stranger, by his quiet manner and uniform courtesy Mr. Taylor made many friends on the night force, who will extend to him a warm greeting on his next visit to New York.

Jim Crate is in receipt of a letter from Water Gap, Pa., asking for "three cents' worth of the New York operators' copies." It is related that on the occasion of a visit from the Chinese minister and suite some years ago, one of the Celestials, espying John Lenhart's "copy" on the Eastern Press wire, pounced upon it with eagerness, exclaiming: "Hi! yi, a letter from home," and refused to be comforted after the mistake was explained.

Of the many pleasant customs inaugurated some years ago, there is none anticipated with more pleasure than the annual re-union at Coney Island. On Thursday evening of last week the party, consisting of Fred Catlin, John Ashhurst, George Walcott, Dave McEneeny, Percy Jones, Johnny Young, Tom Tobin, Jules Guthridge, John Calvert, Gus Coleman, Charley Parr, Gib Merrill, J. White Kelley, John Wright, Dennis Harmon, James Stark and Charley Howlitt, accompanied by an equal number of ladies, assembled at Cable's Hotel, where, dividing into groups an elegant dinner was served, consisting of six courses. The night was a perfect one. Not a cloud obscured the brightness of the stars, the brilliantly colored lights, the dancers in the pavilion opposite, the music, the countless promenaders, and the shouts of the bathers, all formed a scene at once picturesque and exhilarating. Amid the popping of champagne corks and gay sallies of wit, two hours passed by unheeded. Percy Jones having borrowed an outfit, wooden shoes and all, from Haw Wo, in the laundry beneath, recited the "Heathen Chinee" in a felicitous manner. George Walcott and Dave McEneeny then sang "Larboard Watch." This was followed by a plaintive little ballad entitled "Darling, I am growing old," which Fred Catlin rendered with much feeling. Charley Howlitt favored the company with a song and dance, and several other gentlemen contributed their share to the evening's enjoyment. At eleven o'clock an adjournment was made to Feltman's, where Contorno's band furnished the music for dancing until two A. M., when the party returned home in a special train. Extract from that diary: "Wires working well, and all hands being pretty fresh, stood a good deal of 'salting'."

That Handsomest Man.

It is related that in the golden days of the Troubadours, in the south of France, there was a tribunal called the Court of Love. It was composed exclusively of ladies, and settled all disputes concerning "bravest knights and fairest fair," the only appeal from their decision being directly to the Dauphin of France. We have received so many letters lately on the subject of "Our Handsomest Man" that we would fain call for a revival of the old French custom; and if the candidates and their champions will settle the matter among themselves, we will be ready to act as the Dauphin. The following is a complete list of the nominations:

J. J. Royal, Charlotte, N. C.	Mr. Eckett, Toronto, Ont.
A. W. Beidler, Chicago.	Mr. Simmons, Cleveland, Ohio.
A. L. Baker, Chicago.	Mr. Derrickson, Cleveland, Ohio.
P. Stewart, Elizabethtown, Ky.	R. Phelps, Georgia.
Stephen Decotah Bennett, Pensacola, Fla.	Blake Reynolds, Arkansas.
Charles Hall, Philadelphia.	Bert Deane, Woonsocket, R. I.
Allen Schug, Jenkintown, Pa.	Supt. J. D. Redding, Tuckertown, Fla.

Mr. John Vollrath and "Woodsey," of Philadelphia, have been dropped, being manifestly below the standard. M. D. Crain, of Kansas, has been excluded, owing to no one seconding his nomination; and another man, "late of the Slough of Despond," has been set aside, objection being made to his late dismal associations.

What Says my Lady Viola?

PROVINCETOWN, Mass., Aug. 3, 1877.

TO THE EDITOR OF THE OPERATOR:

There seems to be a good deal of contention of late as to who is the "handsomest man." Now, what do we gents care who the handsome one is? It is of much more concern to us who the handsomest lady is; so why not change the subject? Some one has mentioned Miss Nellie Hammond, and we have several in mind who, we think, would do well to compete for the prize.

This reminds me of a suggestion published in THE OPERATOR about the time that Oney Gagin's portrait came out—that of publishing the portraits of prominent lady telegraphers; and, of course, the handsome ones are prominent. Why not follow out that suggestion, and give us a chance to judge for ourselves?

Who seconds this?

K.

A Free Advertisement.

Times are hard, especially in the telegraphic "college" business, in consideration of which we insert this advertisement free, dedicated to the profession at large.

The following list of PROMINENT TELEGRAPHERS are now, in addition to their duties as telegraph officials, engaged in furnishing TALENT to the profession for a paltry consideration of from thirty to fifty dollars per quarter per man:

M. D. CRAIN, Chief operator, W. U. Kansas City.
JULIEN SOULE, Manager and "Electrician," A. and P., Philadelphia. 55 D. H.

G. B. HUBBELL, Manager W. U., Hartford, Conn. [The last we heard of Manager Hubbell, he was "manager" of a base ball club, and we congratulate him on his efforts to elevate himself.]

The list is small, but quite enough; nevertheless, we will deadhead an advertisement for any other man who can prove satisfactorily that he is engaged in the dual occupation of manager and professor.

Now, This One Ought to Have A Leather Medal for His Cheek.

Our attention has been called to the following advertisement, which is taken from the *Herald*, of Utica, N. Y., and which is probably inserted in other newspapers.

"Young Men learn telegraphy with us, and you will be placed in salaried Western Union offices. ** Promotion certain."

WESTERN SCHOOL OF TELEGRAPHY,
ENGLEWOOD, ILL.

So far as the Western Union Telegraph Company is concerned, the promise made is entirely unauthorized, as no arrangement has been entered into with any Western Union telegraph official by which students can be assured of employment, — *Journal of the Telegraph*.

Resolutions of Respect.

ANNA, OHIO, Aug. 22, 1877.

After the funeral services of Charles Bronson, late agent and operator at Columbus Grove, at Anna Station, Sunday, August 19th, he having died on Friday from injuries received the day previous by falling under a freight train, a meeting of railroad employees was called to be held in one of the special trains provided for the transit of the employees by the company.

A large number of gentlemen were present, and the meeting was called to order by calling Jno. A. Gardner, of Lima, to the Chair, and the election of A. M. Kuhn, of Wapokneta, as Secretary, W. C. Tingle, of Columbus Grove, Jno. A. Doran, of Troy, and Geo. W. Lisbawa, of Cincinnati, were appointed a Committee on Resolutions, and in a few moments reported the following preamble and resolutions, which were unanimously adopted:

WHEREAS, God in his Providence has seen fit to remove from our ranks by death, Chas. Bronson, agent and operator at Columbus Grove, and that in this removal we have lost a most highly esteemed fellow laborer, therefore be it

Resolved, that we, his fellow laborers, while recognizing the hand that has afflicted, and bow in perfect submission to the stroke, express our sorrow that one so gifted should be so summarily taken from us and a life of great usefulness, finding consolation only in the fact that what is our loss is his eternal gain.

Resolved, That to his bereaved family we tender our earnest sympathy, realizing that while we have lost a comrade we had learned to esteem for his manly integrity, admire for his business qualifications, and to love for his warm, kind heart, the wife has lost a noble and affectionate husband, the children an indulgent father, and the brother and sister a brother whose life was such as to command the deepest respect and love of all men with whom he came in contact.

Resolved, That we tender to the officials and assistants of the C. & D., and D. and M. railroads, our thanks for the special trains enabling us to pay our respects to the deceased brother, and failing in language adequate to our appreciation, we call their attention to this presence that it may speak for us wherein language fails.

Also our thanks are due to the Odd Fellows' Lodge at Columbus Grove, and the Committee of Arrangements at the same place, for the labor performed by them; and to all and any others who may have done aught to add to the honors conferred upon the deceased.

Resolved, That these resolutions be published in all newspapers published on the line of the D. and M. railroad, in the *Telegraph Journal*, *The Operator*, *Railway Aid and Expressman's Gazette*; a copy furnished the family of the deceased, and one to Mr. R. M. Shoemaker, President; Mr. L. Williams, General Superintendent, Mr. J. H. Weller, Assistant Superintendent, and Mr. A. M. Matheany, Train Dispatcher.

From the Dominion.

MONTREAL, August 21, 1877.

DEAR OPERATOR:

In my last communication some very important omissions occurred, viz: the name of B. J. Hickey, "Os," chief dispatcher East, was omitted, owing to his being at Point St. Charles, relieving Mr. Bell of the traffic department, who was relieving Mr. Lar-mour, division superintendent, Stratford, who was sick with brain fever. The names of Messrs. Wayne, Lanks, and Peterson, dispatchers, "Os" were also left out. Messrs. Beattie and Dube should have been mentioned in connection with "S. C." Since writing you before, Mr. Stinson, of Kingston, has resigned his position, and is succeeded by R. Boyd of Brockville, while Mr. McRossie of "G" goes to relieving agent East. The names Horton and Paixette in your last should read Zimmerman and Payette. Mr. Wagner has returned from Europe after a stay of eleven months, and is at his old business, relieving agent Central district. Mr. McCarthy, late of St. Hyacinthe office, has resigned and accepted a position with the Dominion Telegraph Company in their Montreal city office. Jim has the best wishes of the boys. Mr. Cherry, of "A" office, takes his departure for New York City next week, having made arrangements with Manager Downer to work in that city. Yours, LUDDY HOCKING.

Goldshoro', Penna., on the Delaware and Lackawanna road, is named in honor of Jay Gould.

Dashes Here and There.

Raymond Lully, in 1272, speaks of the magnetic needle as well known for its use to mariners.

The operators of Philadelphia are said to be organizing a brass band. Brother John F. Vollrath will play the base drum.

G. B. Richmond, of Lansing, Mich., has invented what he calls an Electro-hydro Telephone. It is to be used for talking purposes, and we have the authority of Professor Kedzie, of Mich., for pronouncing it a valuable discovery.

There is a saloon-keeper in Philadelphia who was at one time Charge d'Affaires for the Republic of Texas, at Washington, and who received from Professor Morse the patent right of the electric telegraph for the Texas Government. The document is now filed among the Texan archives.

JOHN MANNERS AS A POET.—The English papers are going into ecstasies over an old gentleman who dropped into a postal telegraph office recently, and not feeling satisfied with the attention paid him by the young lady in charge, created a dramatic scene by suddenly announcing himself as John Manners, the Postmaster General.

Being a younger son of the Duke of Rutland, he is called, by courtesy, "Lord" John Manners, a fact probably overlooked by the unsuspecting maiden. However, if she had been as wide-awake as our own fair telegraphers are, she would have scored a good point against his lordship by quoting to him some of his own poetry—an effusion which he probably wishes to be forgotten, viz:

"Let our fame and commerce die,
But give us our old nobility."

THRILLING EXPERIENCE OF AN OPERATOR.—At one o'clock Sunday morning, July 29th, the night operator at the M. C. R. R. depot, Eaton Rapids, was suddenly startled by seeing three men standing in the door of the office, each with a revolver pointed at his head. After warning him that any resistance upon his part would result in his death, they bound and gagged him, and then proceeded to rifle his pockets and the office generally, obtaining the rich reward of a revolver, watch, and about \$7 in money. Becoming satisfied that there was no more plunder obtainable, they blew out his lamp, and taking his keys, locked both the office and outside doors, and left him to his own reflections. He succeeded in removing the gag from his mouth, and with some difficulty got his feet loose. But his hands were too securely fastened to be unloosed. After several attempts he managed to explain the state of affairs to the Jackson operator, and when the night express arrived at three o'clock, he was freed from his unwilling confinement.

THE NEW YORK INQUISITION.—A man sued a Bowery saloon-keeper last week for assault and battery by shocking him with a powerful galvanic battery. It appears that the defendant mildly requested the complainant "to take down that clock," an inoffensive looking dial'd machine hanging on the wall. Immediately after the defendant's taking hold of "that clock," terrific yells made the welkin ring, and the atmosphere for a quarter of a mile thereabouts, was literally filled with wriggling arms and legs and locks of hair, each individual hair standing on end. The victim further complained that while writhing in misery he was confronted with a cheap chromo representing a leering man with his tongue in his cheek, one eye shut, the other wide open, and a most hideous grin rippling over its diabolical countenance, while it bore a motto: "What do you say?"

PERSONALS.

The Philadelphia Press calls Ed. Johnson, who is exhibiting the Edison telephone, "Professor" Johnson.

Mr. Frank Johnson, late of the Atlantic and Pacific Company, Philadelphia, has resigned, and is now with the Western Union in that city.

David Anderson, who died recently at Newark, N. J., "took" President Andrew Jackson's first message; that is, he expressed it on horseback, between Philadelphia and New York, being a mail rider between those cities.

Probably the youngest railroad directors in the United States are James Blair Preston, aged 12, and William H. Blair, 10 years, who are directors of the Paulinskill Valley railroad, in Mass. They are grandsons of Mr. John I. Blair, who owns the road.

At the examination of some of the incarcerated strikers at Newark, N. J., on the 15th ult., Superintendent John Fuller, who is described in the newspapers as "a telegraph operator," testified that when he refused to send a message for the rioters, they asked him how long he expected to live. John gave it up, but he sent the message—collect.

Frank Ives Scudamore, Esq., C. B., formerly of the British Postal Telegraph, and latterly director of the International Ottoman Post Office at Constantinople, has resigned the latter position. A later dispatch from Mr. Scudamore says that he has arranged his disagreement with the Turkish authorities, and has resumed his post in the mail service.

FROM CALIFORNIA.—G. E. Emerson is train dispatcher of the S. P. R. R. at San Francisco. R. P. Hammond is manager, and F. L. Vandenberg is general superintendent of the Atlantic and Pacific line at the same place. N. A. Gilman is manager of the Atlantic and Pacific at Mountain View, Cal., on the S. P. B. R. W. St. John is in charge of the Atlantic and Pacific office at Salinas City. Frank Mark runs the Western Union office same place. B. W. Starr is manager of the Atlantic and Pacific at Gonzales, and also ticket agent for the S. P. R. R. Y. P. Villegas is operator for the Atlantic and Pacific, and also railroad agent at Soledad, the southern terminus of the S. P. R. R. A. E. Averett represents the Western Union at the same place.

PRESENTATION.—The employees of the F. N. S. and C. division of the Long Island railroad presented a handsome gold watch to Mr. C. R. Fitch, upon his retiring from the office of train dispatcher, which position he has held for the past two years. The presentation took place at the residence of Mr. Fitch at Flushing. An excellent band of music, and a Glee Club was in attendance, and felicitous speeches were made by Messrs. Kalt and Fitch. The following inscription, together with the monogram "C. R. F." was engraved upon the case of the watch: "Presented to C. R. Fitch, by the employees of the F. N. S. and C. division, Long Island railroad." Mr. Fitch was highly esteemed both by the officers and employees of the road, and his departure is very much regretted. He goes to Cleveland, Ohio, where he will fill a position on the Atlantic and Great Western railroad similar to the one he held on the Long Island railroad.

ST. JOSEPH, MO.—At "C." office, K. C. St. J. and C. B. R. R., are Messrs. J. M. McConiff, superintendent of telegraph, E. G. Allen, train dispatcher, and J. M. Morey, assistant, with Charles Batson, "the beauty of St. Joseph's force," as night dispatcher. James W. Sneed is at "S. F." office, on the N. M. R. R. Mr. G. M. Hohl has charge of the office of the H. and St. J. road. Mr. J. Hansen is superintendent of telegraph at "G. O." Denver City road, and Charles Fleming, operator. Mr. W. H. Woodring manages the A. and P., and is assisted by little Alex. Washington. At the W. U. office are found C. E. Burroughs, manager, J. I. Briggs, chief operator, and C. E. Baumeister, A. J. Wiley, night manager and report operator, and Miss Marion Carpenter. Also M. Herson, David Thompson, and Edward Tolin, messengers.

N. O. AND M. R. R.—Mr. E. M. Wallace is the efficient Train Master, days, and George H. Adis, nights. J. M. Dunlap "and the mosquitoes" are at Chef Minture. Ben Stillwell, formerly of the N. O. J. and G. N. R. R., is at Rigolets. C. K. DeLappe is at Bay St. Louis, and W. W. Wall at Pass Christian, Miss. At Mississippi City we find J. K. Henley. Wm. Dukate, of Indiana, is agent and operator at Biloxi, and J. F. Mathews represents the W. U. at Ocean Springs, and at East Pascagoula we find J. N. Gueringer and W. T. Harrison, a great "ladies' man." E. W. Wright is at West Pascagoula. At Grand Bay and St. Elmo we find Joe J. Davidson and Louis L. Church. F. W. Gasline, Jr., is at Mobile, and Wm. Parham is "roustabout."

BIRTHS.

August 18, 1877, to Samuel D. Sprigg, of the Western Union Baltimore office, a daughter. Nine pounds.

August 20, 1877, to P. V. De Graw, of the Associated Press office, Washington, D. C., a son.

DEATHS.

BOYD.—At Longview, Ga., August 13th, Joseph Boyd, Jr., formerly of the Western Union Telegraph Company, aged 19 years.

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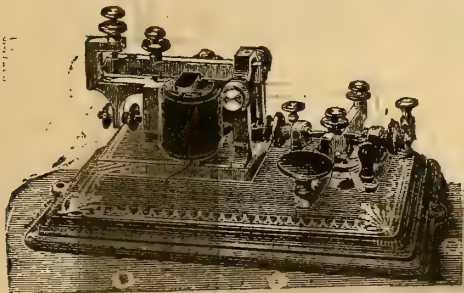
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A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

VOL. VIII.

NEW YORK, SEPTEMBER 15, 1877.

No. 2

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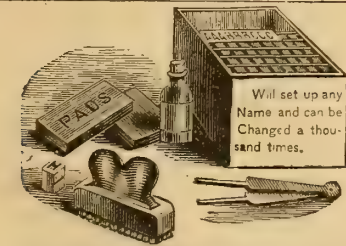
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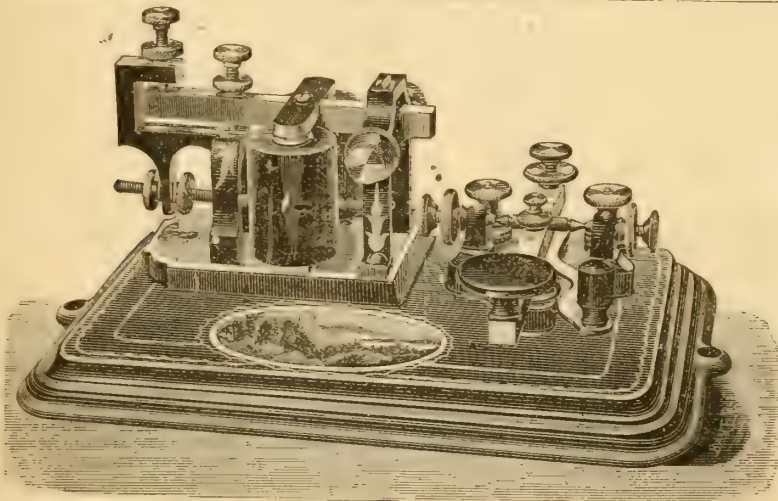
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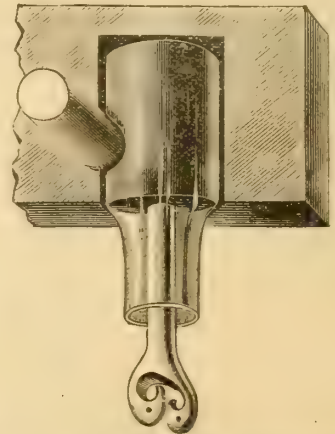
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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

September 15th, 1877.

Volume VIII.

Whole No. 86.

Give Me Rest.

Only one moment, unfettered by care,
Hushed as the temple devoted to prayer,
When Heaven is painting the West,
Flooding the sky thro' its portals ajar,
Looping the curtain of night with a star—
Give me rest.

Spirit of power, forever you'll reign,
Tyrant, enslaving the heart and the brain,
With ev'ry endeavor oppressed,
Sick of the lessons that nature has taught,
Wearied with burdens of infinite thought—
Give me rest.

Grant me a potion lethean, a draught
Sparkling with tranquil repose never quaffed
By mortals at pleasure's behest,
Give me a peace the world cannot give—
Respite from action; to act is to live—
Give me rest.

Ceaseless the toil of the spirit distraught,
Boundless the realm of invisible thought,
Where imagery lingers caressed,
Waves of oblivion over me roll,
Welcome forgetfulness bring to my soul—
Give me rest. JULIA CLARK.

Narcissa.

BY JOHN OAKUM.

Narcissa's mother called on our manager one day to apply for a situation for her daughter. She explained that she came from Foxboro, was a widow, and had visited P—, to dispose of some butter and cheese. She said Narcissa had been "practicing in the Isolated Company's office," and added, that "Mr. Van Shoot says she doose fus' rate." Something in the old lady's homely, though sincere manner, enlisted our manager's interest, and knowing that vacancies on the Insulated Line, recently established by Mr. Van Choate, were few, owing to the limited number of offices, he told her mother that he thought perhaps Narcissa would do to succeed the retiring operator at Howgate.

"That will be clever," returned the mother. "I aint never had no chance to go nowhere myself, and I want Narcissy to git some polish onto her, by going away from hum a spell." So it was decided that Narcissa should come down next day, and if she passed a satisfactory examination, go up to Howgate at once. She dawned on us bright and early. I say dawned on us advsively, for she was "as pretty as little red shoes," and wherever she went, likewise went sunshine. There were five of us operators in the American Company's office—all young and single—and we were madly in love with her on sight. Oh! but she was pretty, and the little rogue seemed to be perfectly oblivious of it, too, which rendered her trebly bewitching. She was what the country people call "bright," but she was by no means cultivated. While her speech ran less luxuriantly to negatives than her worthy mother's, it was faulty, and it was disturbing, to say the least, to hear her ejaculate, "You don't say so," or "Dew tell," when we explained the *modus operandi* of transacting business in a large office. But whatever faults of culture were hers, she was a vision of delight, viewed as a physical creation. Such bonny brown hair, with a tinge of sunshine in it; such a chin; such teeth, and such a plump little figure! It would have been sheer blindness not to have fallen in love with her. None of us suffered from an impaired vision, and we became enamored with one accord. We read of damask cheeks in our maturer years, and instinctively think of the bloom of youth, lily white and pearl powder. We are apt, moreover, to revive that overworked joke of Sheridan's, and observe cynically: "Yes, her color comes and goes—comes in the afternoon, and is gone in

the morning." But no one who ever saw Narcissa, but would believe in a damask skin.

"Her cheek was like a 'Catharine pear—
The side that's next the sun."

I am afraid, as I grow older and more conscientious, that Narcissa was not an expert operator, but we made a report to the manager which secured her the Howgate office. He was not a Morse operator himself, and trusted us implicitly. I suppose that if, by any chance, she could have been retained at P—, we could have agreed on a favorable verdict whatever qualifications might have been requisite. To be sure, she made an "f" for a "w," and she was so generous with her dots, that if the surplus ones had been counted and checked against her, as I am told is now the practice on certain nameless lines, her salary would not have paid the tolls. But in our eyes those were but trifles in those glad years, and looking down into the pure depths of her violet eyes, I thought she was an angel, and I almost came to think that "gku" was an improvement on "tnk u," as she said it to Fred Ford, who had just told her from the switch that she sent like a man. He blushed a little as she naively inquired how long he had read by hournd—I am not sure but she said by pound—but I abated my admiration not an iota.

Oh! woman, woman, ye impale us on a lance as long as life! Had Fate not willed it otherwise, we might detect the incipient slat lurking beneath the smile that wreathes thy baby lips, or see it darting toward us from the dancing eyes of maid or matron fair. As it is, we dangle near thee, always—pierced through the heart, yet all unconscious how and when ye dealt the painless blow which makes man thine forever! That was a long time ago, little Narcissa. I wonder where you are to-day, and I wonder, too, if you are as happy and contented as you were once sweet and winning! "The years are swindlers," says the singer, "they make us old before they make us good," but I hope you are not old even though the years *hace* crumbled beneath us sadly, since that radiant day of meeting. Perchance, you are waiting lightnings somewhere in New England, but more likely you are married, and have merry, romping children plucking at your gown, to share their mother's smile. I trust that peace, prosperity, and all good things surround you, wherever you may be, and if you are as pretty as of old, you must make happy even the placid mirror which reflects your sunny face!

Pardon the digression, my reader; but it is so natural to fall to musing, that I could not help it. When you grow older, and your brown locks or tresses are streaked with silver, and younger men and women are doing the courting, at which you are now so clever, you will find yourself indulging in retrospect just as I do. Narcissa's *debut* at Howgate was not marked by unusual brilliancy, but the distance from our city was short, and one of us was pretty sure to be with her during the better portion of the day. Occasionally, to my regret, two of us were in attendance, to do her work, and that was a state of things much to be deplored. Mornings and evenings, however, owing to the peculiarities of the railroad time-table, she was alone, and as she tumbled out our call and signed, the effect was demoralizing. The signal for Howgate was "Hw," and Narcissa favored extremely long dashes. The "H" generally came staggering in with moderate safety, but her manner of adding the "w" gave her call a weird, sad sound, suggestive of a clime where the thermometer would be inadequate. Sometimes, in a fit of generosity with her dots, she rendered it "Pell." But our periods of depression were only transient, for, on seeing her, we straightway forgot her infirmities of skill, and sat and feasted our eyes on her surpassing beauty. Through one entire summer we vibrated between adoration of Narcissa and disenchantment, because of her peculiarities, telegraphic and otherwise. Fred Ford, who was the oldest of us all, ceased his attentions one September day for personal reasons. He plumed himself on his accurate and finished sending. Visiting her in the afternoon he found a message undelivered which he had sent in the morning.

"This message was addressed to Miss H. A. Sherman, not as you have it—to Miss Hasherman," said Fred.

"That was the way you sent it," said Narcissa, demurely.

"Oh! I dare say," returned Fred, sarcastically. "Have you notified New York yet that you failed to find Miss Hasherman?" he inquired. "That would have disclosed the error."

"No, indeed," she replied, carelessly. "The message is *paid*; I didn't fret myself about it."

Fred was not entertaining in the interval to train time, and Narcissa, I fear, pouted a little. Fred regretted his quick temper afterward, I think. Narcissa had probably been told on good authority that money was the objective point in the telegraph business, and the message being prepaid she regarded it a small matter whether or not it was delivered. Fred used to say, sometimes, that he was going to make it up with her, but when the war broke out he went away suddenly, requesting me to tell Narcissa he sent her his love.

Ned Jones retired as an admirer along in October, after attempting thirty-seven times, one day, to get the signature "A. H. Okie" to a station on Narcissa's wire. She was anxious to obtain circuit, and to her, in common with a great many of her sex, "O. K." was the signal to climb it.

Poor Neddy! I think he loved Narcissa, but he was more fastidious than the rest of us, and he "died of a color in aesthetic pain," figuratively speaking, and relinquished her. Narcissa's orthography was defective, a point on which Billy Jackson was "more nice than wise," as she afterward expressed it. In a note to him she spoke of "fenses" the "new mown gras" and invited him to "com down on sundy and go gathering furs." Dear, particular Jack! he couldn't stand it, and that Sabbath and many others have glided by without his giving his attention to the ferns at Howgate. "It is no use, John," he said, gloomily; "she is a beauty and a darling, and I can endure her telegraphing, and all that, but when she attempts to foist her phonetic system of spelling on me I won't have it. I am not a believer in phonetics, and Narcissa is not for me. Woo her yourself, and win her. She may call you her 'dier,' but *you* are a philosopher, and don't strain at gnats, as you are fond of telling us." Jack was a sad dog, and he went off laughing at me.

Thus out of the five only George Hunter and I remained staunch to the divinity at Howgate. We were sworn friends, and had been for years, but we quarrelled about Narcissa at last. It was on a dull December day that we proceeded into the suburbs to fight it out. We compromised on talking it over, and when we parted we had promised not to visit or write to Narcissa for six months. At the end of that time we were to compare notes, and determine upon our future action. Idly done. Before five months had passed Hunter had become engaged to his present wife, and I was assiduously besieging the heart of a lady operator—and she worked not at Howgate. All of the old force deserted P— within a year or two, and Narcissa was left behind us. But she long since left Howgate, and her successor was unable to tell me, as were also her old neighbors at Foxboro, when I inquired, whither she had gone. There are four sober-going married men, however, who must always remember Narcissa as a vision of loveliness, and in whose foolish old hearts there are sometimes longings to view once more her lovely girlish face. Fred Ford is one of those of whom Mr. Aldrich says:

"The long years come, but they
Come not again."

He was killed at Antietam, and sleeps beneath the "unremembering grass" now waving where erstwhile the battle roared. We hoped, once, that he would return and marry Narcissa, but that is past, and we can only invoke her image. We do that often, and her bright, piquant face illuminates and makes beautiful the rich and splendid past until we become four very proud partners in a memory as sweet and witching as an evening breeze on which comes wafted the odor of mignonette.

Letters from Europe.

I think I enjoyed myself better during my visit to Paris than on any other week since I left New York. It was rare fun trying to get into conversation with those Frenchmen! No matter how fair a French scholar you may consider yourself, theoretically, they jabber so rapidly, cut up and part their words in the middle so extravagantly, and pronounce so diabolically generally, that you may count yourself very lucky indeed if at first you are able to catch even an unfortunate word here and there. If you know anybody who particularly prides himself upon being a very fine French scholar, and has never been in Paris, just advise him to visit that gay capital once, and I pledge my editorial honor he'll get the conceit taken out of him in a remarkably short space of time!

There are several routes from London to Paris. I chose the one via Newhaven, Dieppe, and Rouen. Among others of my fellow-passengers, I got into

conversation with an intelligent Frenchman of perhaps twenty-three or twenty-four. He was returning after three years' study in England, and besides speaking English admirably, was well-informed, agreeable in conversation, of an exceedingly graceful figure, and handsome. We talked of London—the Strand, Regent Street, Hyde Park, the ladies—ahem!—and, by way of ingratiating myself at once and for all time into his good graces, I remarked, "promiscuous like."

"The Parisian ladies are handsomer, I presume, than any you've seen in England?"

"Not at all," he replied, quickly; "the English ladies are much prettier than the French. I used to fall in love every day with the handsome women I saw in the Park. Splendid forms"—inflating his chest and assuming a more erect position—"and perfect angel faces, many of them."

Before I had time to suggest anything about the grace and beauty that may daily be enjoyed at Central Park or on Fifth Avenue, he unlocked his traveling bag, produced a huge pile of, I should say at least a hundred, letters, and dropping his voice into a confidential whisper, while his eyes fairly sparkled with delight, continued:

"I have a girl in England myself. I got all those letters from her in less than a year. Why, that sweetheart of mine learned me more of the English language than I got from all other sources combined."

I do not for a moment doubt but that learning a foreign language from one's sweetheart must be very pleasant. The only trouble, it seems to me, is, as Dion Boucicault says, the fact of its being an "extremely dangerous thing to make love to a young lady through an inkbottle." But I suppose the poor fellow never thought of that.

I saw him again as we neared the French coast. He was engaged in a very excited, though perfectly good-natured, debate with a German on the subject of the late war. I had no idea that the feeling between the two countries was quite so bitter, but it seems that the French people feel their humiliation keenly, and refuse to be comforted. Nothing will satisfy them short of avenging what they call the insults of 1870 in blood, and it is said that they are even now quietly preparing for war.

Many of the passengers, like myself, were traveling Parisward for the first time. In conversation with several I found that while some boasted of having made the study of French a specialty, and felt confident as to the result, the greater proportion relied upon "luck," and the slight knowledge they had of the language—particularly the former—to carry them through. And, like the man who boasted that his wife was the most even-tempered woman in the world, being always mad, the one appeared to get along about as well as the other—each being alike unable to understand or be understood.

I laughed very heartily several times during the trip at little episodes which, while they were exquisitely amusing to a person placed in the rather embarrassing position of a stranger in a strange land, but possessing a keen sense of the ridiculous, might not, perhaps, prove as interesting to you, dear reader. The first, however, occurred at Dieppe. Having landed more than half an hour before and partaken of an excellent breakfast, we were waiting for the train to Paris. Some freight cars were being shunted, and a regular John Bull Englishman being in the way, one of the railroad men shouted, "*Prenez garde!*" John didn't seem to quite realize the fact that he was in a strange and foreign land, and that that was the manner in which they requested people to "take care" in that "blasted country;" at any rate he merely stuck his hands farther into his pockets, turned up his nose in a most supercilious fashion, nobly stood his ground, and with charming unobtrusiveness asked, "Who's he?"

Arriving at Rouen, an industrious place of 95,000 inhabitants, historically interesting, and where William the Conqueror died in 1087, another gentleman and myself remained over until the next train. This proved to be much slower than the other, which, however, afforded a better opportunity of seeing the country. There are three classes of passengers on the French as on the English railroads. I don't know about the third, but in the first and second classes, compartments are specially reserved for ladies traveling alone. My friend and myself happened to find our way—accidentally, of course—into one of these, not supposing it made much difference, but the conductor speedily dispelled that illusion. I don't know what he said, precisely, for he didn't "space" worth a cent; but we forthwith moved into another compartment without even stopping to indulge in what the boys call "sass."

We were now the only English speaking passen-

gers, and you would have laughed had you witnessed the efforts we made to find out whether the train ran through to Paris, or if we had to change. Part of the way the only other passenger in the compartment was a rather elderly but very lively and good-natured French gentleman, who couldn't speak a single word of English. We had a very enjoyable time trying to talk to him, and obtained the pronunciation of several words from him. Better success attended our efforts when each wrote what they had to say with a pencil, the pronunciation being the principal barrier. He inquired our ages, and being informed, good-humoredly chided one of the parties—modestly prevents a more definite reference—for not cultivating side-whiskers. I think he said his own age was 67½. After a while another military-looking gentleman joined us, but he couldn't speak English either. When we reached the station where tickets are given up, my friend, not being quite certain on the subject, inquired of the collector, in the plainest of English:

"Do we give up our tickets here?"

The Frenchman merely elevated his elbows and shoulder-blades and shook his head in an imbecile way, without saying a word.

"Oh, replied my friend, soothingly, and still in English, 'it's all right; here you are!'" and then he looked sheepish and cheap, stamped vigorously on the floor of the car, and remarked, more probably to himself than his company, "Oh, I always forget that I should speak French!"

I laughed so heartily at the poor fellow's embarrassment, that our French fellow travelers couldn't resist joining in.

But an infinitely more brilliant episode occurred less than three hours afterward, in which a party by the name of Johnston was the hero. On the principle of never spoiling a joke for relation sake, I'll relate it to you. We found several of our English *compagnons de voyage* at the hotel, and all having washed, etc., and feeling like a stroll through *la belle cite*, it yet lacking two hours of the time at which *table d'hôte* is served, a few of us started for a walk. Ever mindful of the readers of THE OPERATOR, I wanted to see the general telegraph office, and if possible examine it and the French system of telegraphy for their benefit, so we sauntered slowly in that direction. We were struck with the number and neatness of the *cafés*, and being among the sights of Paris, it was resolved to forthwith visit one. The waitress who came for the order, though short of stature, had a sweet, good-natured face, and reminded me so much of persons of that ilk I had seen in England, that not precisely relishing the idea of another of those scenes which conical though they be—especially to your companions!—are eminently embarrassing to yourself, I inquired:

"Do you speak English?"

I argued that if she did, she would, of course, understand the question in that language. The French are a very sharp people. She took our grotesque situation in at a glance—foreigners—first time in Paris—speak but little French. Looking from one to the other, her face assumed an expression of infinite amusement, and fairly shone with one of the heartiest and most good-natured smiles I have seen in a long time. She shook her head slowly, and in a voice of great tenderness and pity, as if she sympathized heartily with us in our unfortunate condition, replied:

"Je ne comprends pas, Monsieur."

Now, when people are in a strange country, and don't know exactly what they want, or the language in which to ask for it, they are inclined to imitate the drowning man catching at a straw. It struck me that although this damsel had just acknowledged that she didn't understand a word I was saying, there might be a possibility that some one in the establishment could speak English, and not caring to give the matter up without at least another effort, I said to her—in English:

"Is there anybody here who does?"

Not only did my companions laugh until they were almost blue in the face, but even the waitress joined in with such keen relish, that I positively thought for a time that she must have thoroughly understood the language, and heartily appreciated my ridiculous mistake. After the laugh had subsided, we drew upon our stock of French, and succeeded in letting her know what we wanted; but another difficulty arose, we hadn't any French money among us. An English half sovereign, however, made that all right, and we meandered forth smilingly into the great city in search of more worlds to conquer.

The next one was encountered upon reaching a large, solid-looking building in the Rue de Grenelle, bearing the device "Administration Des Lignes

Telegraphique." Of course we had a map of Paris with us, and were able to find our way without difficulty. Stepping in, I addressed the receiver:

"Parlez-vous l'Anglais?"

"Non, Monsieur."

The question was repeated to a number of messengers—all full-grown men by the way, and uniformed, and other employes of the place, without discovering any one who spoke English. I felt morally certain, however, that there must be somebody in the building conversant with the language, and although compelled to give the matter up on that occasion, I subsequently renewed the attack. This time I went into the office of the *Ministre de l'Interieur*, next building. From the first one who challenged me I inquired, "Parlez-vous l'Anglais?" and after a little negotiation, had the infinite pleasure of being introduced to one of the English-speaking clerks. "What did I want?" I told him. The gentleman was out, would be in at two o'clock. I walked about until two, and then found that they had misunderstood me, and thought I wanted to see the new Exhibition Grounds! That was encouraging. Finally I got the man who made the mistake to come next door to the telegraph office and introduce me, which he kindly did. I was then conducted up stairs where I met a man who spoke English in the most distressing fashion I have ever heard. "Vat—you—do—desire?" he ejaculated in a jerky, nervous way, after several breakdowns. I told him slowly and distinctly, but like the plug who after you reach the signature of a message, coolly remarks "?", he said that if I'd write it down he could read it better. I did, and also inquired if there was no one in the building who could speak English a little better. There was a consultation. Presently another man was sent for who spoke English very fairly, and my former friend, who seemed as delighted at getting away as I was to part with him, bowed himself out.

What a time I had though! My conductor was very polite, expressed great regret at the trouble he had to put me to, but assured me that it was a very difficult thing to obtain permission to visit the instrument room. The telegraphs belong to the Government, who are utterly opposed to criticism from members of the press, and as an American had only a few days before been lodged in jail for calling Marshal McMahon an ass, the chances of an American newspaper man obtaining such favors were not particularly brilliant. The Director-General was away, and although we walked all over the building, no one would assume the grave responsibility of permitting me to visit the instrument room in his absence. I, however, visited the rest of the building, and even had a peep at the operating room through a window. I learned also that between forty and fifty millions of messages are handled in France every year, and sixteen millions in Paris alone. Each circuit, however, over which a message passes is counted. Thus a message which must pass over three circuits to reach its destination is counted three messages, or five circuits five messages. There are about 5,000 offices in France, and 60 in Paris. About 700 operators find employment in Paris, and fifty of those in the main office are of the gentler sex. It may interest American lady operators to know that the French authorities declare that the ladies make very good operators, and give every satisfaction. The Hughes printing instrument is used between large offices. So is the Wheatstone. The other instruments are the Morse Printer and the A. B. C. Single needle instruments were once in use, but have been discarded. There is no reading by sound in France; everything by paper. The alphabet is the same as in England, with additions to represent the acute, and other peculiarly accented letters. An operator's salary commences at the munificent sum of three francs—60 cents American currency—per day, and is increased by slow degrees to 1,500, 1,800, 2,100, 2,400, and sometimes even as high as ten or twelve thousand francs a year. A franc is about twenty cents. The Director General's salary is 15,000, the Paris manager's, 5,000, managers of large provincial offices, 2,600, and the average salary of telegraphers perhaps about 2,000 francs, or \$400 a year. But after all, this is a fair enough salary, the cost of living being very low in France—unless to tourists!

There are 250 instruments in the Paris office. The day men work 7 hours every day, and also one night during each week, for which, however, they receive six francs extra. One half the day force come on duty at 7 until 11 A. M. and 6 until 9 P. M. The other half work through from 11 A. M. until 6 P. M. They change off every day, however, the men who came yesterday at 7, coming to-day at 11, and vice

versa. There are about 25 regular night men, whose hours are 9 p. m. until 7 a. m. There is a system in vogue in this office which I have no doubt Mr. Downer might introduce at 197, without being likely to give offence to the efficient night staff there. Unless business is very lively, one-half the night force sleep—facilities being provided in the office—from 9 p. m. until about 1, and then relieve the other half who tumble into the comfortable places thus vacated, and enjoy "nature's sweet restorer—balmy sleep," until they are relieved by the day men in the morning.

There is a large exchange branch office in the Bourse, business being exchanged direct with London, etc. The Lyons office does a good business, employing 100 operators; Marseilles also employs 100, Bordeaux about 80, and Brest, 50. Stearns, of duplex fame, was in Paris a few days before my visit, and it may interest his friends in America to know that the French telegraph people speak very highly of him. The duplex has been in use in France for the last two years, and gives great satisfaction. The telegraph business, they tell me, is rapidly increasing, and, as my informant expressed it, although for several years we were losing money, last year we 'won' some, which shows a satisfactory state of affairs. I could tell you more about Paris, but shall spare you at this time. I expect to reach New York about the time this paper is in the hands of the majority of the readers. Don't you wish the "Adriatic" may not take it into her head to break her shaft as the "Berlin" did? I do. W. J. J.

Nothing is Denied to a Resolute Will.

TO THE EDITOR OF THE OPERATOR:

The article in your issue of the 15th of August, "Genius is Prolonged Patience," from the pen of your talented correspondent "Justus," was well calculated to inspire us telegraphers with ambition to intellectual improvement; and it also suggested to me the advisability of making a few remarks on the heading of this article, with a view to promoting the work so happily begun by him. The design, then, of this article is to illustrate the important truth that there are no circumstances so adverse to the acquisition of knowledge as to preclude the possibility of attaining to intellectual eminence if we resolutely strive for it. I shall sustain this truth by anecdotes of a few men (hundreds might be cited did space permit) who, under every disadvantage have raised themselves to distinction. I shall show that neither humble birth nor abject poverty have been able to arrest the progress of the resolute and persevering student; and that diligence may render its possessor illustrious without the assistance of instructors, and even while engaged in the most active pursuit of every-day life. The love of knowledge will of itself do a great deal toward its acquisition, and if it exist with that force and constancy which it exhibits in the character of all truly great men, it will induce that ardent but humble spirit of observation and inquiry without which there can be no success. Sir Isaac Newton, of all men that ever lived, is the one who has most extended the territory of human knowledge, and he used to speak of himself as being all his life but "a child gathering pebbles on the seashore," probably meaning by that allusion not only to express his modest conviction how mere an outskirt the field of his discoveries was compared with the vastness of universal nature, but to describe, likewise, the spirit under which he pursued his investigations. That spirit was one of *patience and perseverance*. However, as the history of his brilliant career is familiar to all, I shall pass on to another—the late Professor Heyne:

The late Professor Heyne, of Göttingen, was one of the greatest classical scholars of his own or of any age; and, during his later days, enjoyed a degree of distinction, both in his own country and throughout Europe, of which scarcely any contemporary name in the same department of literature could boast. Yet he had spent the first thirty-two or thirty-three years of his life not only in obscurity, but in an almost incessant struggle with the most depressing poverty. He had been born, indeed, amid the miseries of the lowest indigence, his father being a poor weaver with a large family, for whom his most strenuous exertions were sometimes unable to procure bread. In the "Memoirs of his own life," Heyne says, "Want was the earliest companion of my childhood, and I well remember the painful impressions made on my mind when witnessing the distress of my mother when without food for her children. How often have I seen her on a Saturday evening weeping and wringing her hands as she

returned home from an unsuccessful effort to sell the goods which the daily and nightly toil of my father had manufactured!" His father sent him to a small school in the suburbs of the small town of Chemnitz, in Saxony, where they lived, and he soon exhibited an extraordinary desire to acquire information. He made so rapid a progress in the humble branches of knowledge taught in the school, that before he had completed his tenth year he was paying his school fees by teaching a little girl, the daughter of a wealthy neighbor, to read and write. Having learned everything comprised in the usual course of the school, he felt a strong desire to learn Latin. A son of the schoolmaster who had studied at Leipzig, was willing to teach him at the rate of fourpence a week, but the difficulty of paying so large a fee seemed quite insurmountable. A friend, however, paid the required fee for him. He continued his lessons for upward of two years, when his teacher acknowledged that he had taught him all he himself knew. I shall not, however, weary you with a recital of the innumerable adverse circumstances which assailed him, and of his invariable triumph over them after this time. Suffice it to say, that he was ultimately appointed to the professorship of eloquence in the University of Göttingen. He held this appointment for upward of fifty years, in the course of which, as I have already remarked, he may be said by his successive publications and the attractions of his lectures, to have placed himself at the head of the classical scholars of his age, while he was at the same time beloved and venerated as a father, not only by his numerous pupils, but by all ranks of his fellow citizens, who on his death, in 1812, felt that their University and city had lost what had been for half a century their chief distinction. I have already shown "that neither humble birth nor abject poverty have been able to arrest the progress of the resolute and persevering student." In order to prove "That diligence may render its possessor illustrious without the assistance of instructors, and even while engaged in the most active pursuits of every-day life," it is only necessary to refer you to the biography of the celebrated mathematician, Theos. Simpson, who, while engaged for the most part as a weaver, and without instructors, made such rapid advances in scientific attainments, that although he died at the age of fifty-one, he left a number of works, among which may be mentioned his "Mathematical Dissertations," a "Treatise on Algebra," "Elements of Geometry," etc.

I have endeavored, Mr. Editor, to show, from this article, the rewards which accrue, to indomitable perseverance and unyielding mental energy. Difference of success in this world is rarely the result of external circumstances—by no means always the result of extraordinary intellectual endowment; it is more commonly the result of strong determination than of anything else. Circumstances can not create power. Talent may be neglected or misdirected, but a strong and determined will clears away difficulties, extracts good out of evil, makes even obstacles conduce to success, enlarges and develops the mind, and creates the means for the accomplishment of its own purposes.

Let any one who desires to be stimulated to effort read Foster's essay on Decision of Character, one of the noblest productions in the English language. If I mistake not, he will rise from the perusal of it strong in the sentiment that "Nothing is denied to a resolute will."

NIL DESPERANDUM.

ORILLIA, ONT., CANADA, Sept. 3, 1877.

A Quiet Talk With the "Manager."

CHICAGO, AUGUST, 77.

TO THE EDITOR OF THE OPERATOR:

Shut in from the world, where the mind of each must needs be almost constantly employed, either among the confusing words of their business, or in contemplation of their own shortcomings, or their fitful and confused enjoyments, the ways of the operators as well as those of the managers can but oftentimes seem hard indeed. Particularly so, while their vocations and the chairs they occupy are the only things they may inherit, "to fall back upon." Well may they wonder of what blest account is this world to them, since the rigors of the cloister could bar them only a little more completely from it—and in most cases for life. It is not strange that they should be nervously sensitive to any presence affecting them, either for good or for ill. A manager may have been so doubtfully endowed by nature that his "dispensations" (without it) may reach his subjects (?) smattering of imbecility or insult, and therefore arreced with a feeling of contempt anything but flattering to the dispenser

Operators may not be altogether unbiased in their opinions, nor always reasonable in their declarations, and, hence, there may have been inaugurated a conflict that is only mildly offensive, by the fact that the bellicose and official attitude of the one quite overrides any belligerent tendencies of the other. Operators must of course understand, that in an office of Chicago's large dimensions, to insure order and the safe and prompt transaction of business, they must be governed by a strict system of rules and of discipline. Managers should also understand that where any rule shall vary into working hardships for those subject to it, they should display the good sense to modify it just as far as consistent or allowable. They should understand that their authoritative acts can gain no force nor respect by being exercised in a harsh, uncorseted manner. They should understand that it is for the best interest of their employers and their own safety, that they make no occasion whereby an operator may be unnecessarily brought to feel that his self-respect has been outraged, and thus half of his usefulness lost. A manager should understand that it is not enough that he be able to "set up and balance a quad"—that is an attainment almost any average mind can master with a short course of instruction and study. Decision of character, an unassuming kindly dignity, with the inherent traits of the true gentleman, are the very essentials to a popular and efficient management.

The company—that is, the worthy and honorable head-officials located here—have never made noticeable any disposition seeming to declare that they did not owe quite as much of success to the industrious and harmonious workings of the operators, as to the managers, and it is not at all likely that they will knowingly commit the injustice of appointing or long retaining in authority men incapable or devoid of the qualities above named.

The writer of this note might enter into an extended list of petty meannesses and shameless outrages perpetrated by a pair of "Ch" functionaries upon many respectable and faithful operators in this office, but with the hope of some apologetic amends upon their part, he will, at present, forbear.

SALT.

Was He a Vassal or a Peer?

"I observe that favoritism is being shown," said a tall, gruff-voiced spectre in the A. and P. office, as it counted over its July salary at the cashier's desk, and found that several dollars had been deducted—and here its utterance seemed choked. Its cheeks were sunken and blanched, its chin protruded, one arm hung languidly by its side, while the other, with its long hand grasping the miserable pittance upon which the banditti's levy had been assessed, was suspended mid-way in air. Its sunken and lustreless eyes peered into space in assiduous and ineffably sad contemplation of the robbery which had reeked every scheme and darkened every hope; in contemplation of its home—there were its innocent children, romping in heedless sport; there was their starving mother. The apparition, still standing there, mute but in terrible earnestness, and fired by mingled scorn and utter heart-broken weariness, seemed a picture of the dying martyr at the stake, a figure of one paralyzed and standing in despair in a quicksand, conscious that a deadly current was slowly sucking him in. It was a ghastly reproduction of a Tell, resurrected to speak a word for our manhood; a spirit from the sepulchre and a fit object to haunt a salary scalper in his dreams; a frigid corpse standing there as cold and expressionless as a stone, but conveying an awful consciousness of monstrous passion, venomous revenge, and deep cunning. For a moment longer the cadaver stood speechless, and then the rich mellow voice rang out from the seemingly inanimate body, but without the movement of a muscle, "I observe that favoritism is being shown," it continued, "the assessment has only been made upon a selected and unfortunate few, and even to some of them it has been returned, while the quiet, faithful, and unobtrusive man has been compelled—"

The glass window in the cashier's desk was violently slammed down at this moment, and the woe-stricken spirit of the past strode off with measured tread and all due devotional sadness, muttering something about man's inhumanity to man, while heaven looked down in sullen majesty upon the scene. The witches stirred the caldron again, and I heard the guttural tones of "Hail to thee, Thane of Cawdor," floating on the breeze like incense from the sacrifice.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

September 15th, 1877.

CORRESPONDENTS will please mail all communications heretofore, except those for the Scientific Department, to W. J. Johnston, P. O. Box 3332, New York.

MISS ROSE E. NORTHRUP, operator at Olean, N. Y., has sustained a heavy loss in the death of her mother, who passed away on Thursday morning, 30th ult., at Jacksonville, Fla., whether she had gone for her health. None who know Miss Northrup but will read of her bereavement with sincere sorrow. An estimable and high spirited lady, between whom and her mother there existed an attachment of even more than usual warmth, the blow has fallen on her with almost crushing weight.

To-day we present our readers with "Narcissa," from the pen of John Oakum. It is written in the author's usual happy vein, the humor being light and graceful, and the sentiment sweet and delicate. The droll history of Fred Ford's disenchantment, and Ned Jones' struggle with that signature, are cleverly sketched and true to nature. Our readers will learn with regret that this piece closes the present series of John Oakum's sketches. It is needless to point out the unflagging energy which has kept him steadily before our readers, or the uniform excellence of his efforts; but the gifted author of "Barney Martin," "Marion Scudder," "Old Man Finn," and "Narcissa," should not be allowed even a temporary respite from his labors without first receiving from our profession the hearty acknowledgement which his genius has so richly earned.

THE letter of our Canadian correspondent, "Ni Desperandum," on another page, which has been evoked by a study of Mr. Phillips' *Barney Martin* and the comments of "Justus," is a fruitful subject for the contemplation of all young men. Many a mind has struggled up from the weaver's loom and the carpenter's bench, and many obscure ones have yet to rise. The examples afforded by our own country—Webster, Lincoln, Grant, Andrew Johnson, and a great many others—are too familiar for quoting; but among those who are not so generally known, who have made themselves famous in a totally different branch of industry than that in which they were originally engaged, may be mentioned one of the greatest admirals of the last century—Sir Cloudesley Shovell—who was at one time a hostler. The renowned soldier and victorious commander-in-chief, Lord Clive, was a clerk in the East India Co.'s service, at Madras, when war broke out. And Oliver Cromwell, with the single exception of a seat in Parliament in 1628, continued in obscure rural occupations until he was forty years of age. Our young men profit by a recital of these examples, and John Oakum, Justus, and Nil Desperandum, are doing a very good work in a quiet but able manner.

A Talk with Both Sides.

We print to-day two communications—one complaining of the supercilious and oppressive conduct of a manager, the most moderate of a number received, on the same subject, and the other from a "Plug," mildly complaining of his treatment by his fellow operators. The frequent receipt of such communications, and their having hitherto been prudently laid aside, seems to call for some remarks from us on the subject, which we hope will be received by all parties in as kindly a spirit as that in which they are submitted. From some years of observation, we can say that the cause of these complaints can only be removed, and proper harmony secured, when the wants and desires of one side cease to conflict with those of the other. The whole question is reduced to our ability to conquer selfishness and to cultivate mutual complacencies; and we can contribute most effectively to this end by the habitual exercise of generosity and courtesy on both sides.

Managers should remember, in the first place, that a large number of operators are very young men, just arriving at an age when the finishing touches are being put upon their characters; that the well-being of society depends upon the proper culture of its rising generation; and that most of its members are easily molded into good or bad men, solely by the beneficial or pernicious examples set them at that critical period in their lives. A well-conducted young man should always be allowed to rest in a calm and settled security, without any annoying interferences; he should be addressed by his proper name, and always in a kind manner, and the office should be conducted so as to bring to his mind edifying ideas of good order, and sober, well-established principles. The manager should be such a person as can always appear before the young operator as one who has perfected his natural abilities by years of careful study and self-criticism, by the pruning and trimming of his own faults, and as one noted and to be depended upon for accuracy of judgment and decision of character. There are, of course, often occasions when firmness and even severity is necessary in the government of a large office, but the qualifications should not be prominent features in its management. There is no surer sign of a worthless manager than his unpopularity with *all* of his men; and no better evidence of bad management in an office can be obtained than the continual recurrence of "trouble" between a chief and his subordinates. Many persons in authority, being apt to over-value themselves, are hard to please, and scolding with them becomes a science. Others, who may be less given to railery, make office-life odious by issuing executive orders daily, prescribing, as has actually been done, the color and cut of the coat, specifying the number of buttons to be worn by the men in the office; imposing silly fines of a cent a minute and half a cent for half a minute for coming late; forbidding them, under the plea of evangelizing the force, to visit, when off duty, whatever places they may choose to visit, and then suddenly changing this code of rules for another equally as preposterous and ridiculous. Now, if consistency inspires respect, nothing is more likely to excite ridicule than hasty and ill-considered rules and semi-military regulations. Nothing will lead quicker to rebellion among independent and manly spirits than to be conscious that a manager invents out of his own cranky

crotchets all kinds of imaginary virtues and vices; nothing shows the "loose screw" in a system of management more clearly than a veneration of general orders all over the office, on every conceivable subject, and detailing vexatious and artificial duties for the employes. All men are naturally sensitive with regard to their self-respect, and these foolish edicts are thus received, only with silent contempt by the subordinates. Of course, a large office could not be governed properly without set rules, but they should be as lenient—at all events, as *sensible*—as possible; their authors should be sparing of the personal pronoun and the imperative mood, and when an order is once issued, plainly and explicitly, it is an easy matter for any man with a jot of executive ability to guarantee its observance without promulgating half a dozen supplemental ones in explanation thereof.

There is nothing more gratifying to the subordinates, and nothing more conducive to the discipline and welfare of an office, than the unassuming and kindly dignity of a gentlemanly chief; and when that high functionary resigns some little gratification of his own, once in a while, or assumes some slight extra task for the sake of easing up on a poor fellow, who needs a slight indulgence, he takes a great step in elevating his own character and influence, in facilitating the business of his office and in performing some of the duties in which he is expected by those in supreme authority to participate.

Operators, on the other hand, should remember that a duty can be discharged either exclusively as a duty or as a pleasure, according to the manner in which the worker may look at it. If one superior in authority is found to be superior in "authority" only, we should not make that a pretext for going to war with the inflexible rules which are so necessary to govern any large organization—we should just bide our time. Rudeness, selfishness, and aggressive coarseness on the part of an official can not last forever. Such questionable qualifications form a perpetual stumbling-block to the unfortunate being who is afflicted with them, and if we parry them for the time being with good-nature and cheerfulness, we can afford to let him go to the end of his tether.

Operators should also study to be self-reliant. The consciousness that he is to be "taken care of," spoils a man's ambition quicker than anything else; and although it is a pleasant thought to have the officials "cultivated" (which is a process involving the consumption of no small amount of humble-pie), it is as well to bear in mind that no man is as well equipped for the battle of life as he who is aware that he must do his own fighting, and that the question of success or defeat rests entirely with himself. That a man gets small pay is no reason why he should not do his work faithfully and well, since he has contracted to do so. Good work and fixed faithfulness, cheerful acquiescence and unshrinking alacrity never fail, in the end, not only to baffle the designs of a boorish taskmaster, but also to reap their own reward.

But there are a number of men, luckily a limited number, whom, so far from blaming those in authority for being harsh with, we should, ourselves, drive from our ranks. We refer to the drones; those who shuffle into the office always a few minutes behind time, shirk all they can dur-

ing office hours, eagerly watching the clock, and slipping out on the very second that their time is up. Another small class that we should help to clear out are the swaggering buccaneers and swash-bucklers, whose first greeting over the line to a poor operator, who is perhaps not quite so fast as they are, is, "You plug!" "Swim out!" and such contemptuous expressions. It may be found upon investigation that officials of small patience and a rather limited power of discrimination have been rendered suspicious and domineering more by contact with these blots on the profession than by anything else; and thus the greater number of good sensible operators are suffering through the misdeeds of a few irritating, ungrateful, and unthinking, or very shiftless ones.

Where grievances occur, they can always be ameliorated by a little forethought and forbearance. Some men are gifted by nature with a peculiar faculty for adapting themselves to all kinds of circumstances—fitted, literally, to "melt the heart of a stone." We have seen, in our time, some particularly hard cases; but, after gaining the confidence of such a one, and then expostulating with him, he told us, with really bashful humility, his story—one of such amazing tenderness and misplaced confidence, that we no longer wondered how he ever became such a skinflint.

We are all, master and servant, inter-dependent, and it behooves us to concede a point here and there, to soothe a sorrow, to lighten a load, or dry a tear whenever we can; and there is no better way to do so, in our line of business, than to exercise a little discriminating judgment with those who are in authority, on the one side, or placed in our charge on the other.

Stay at Home.

The disappointment of an unusual number of applicants for positions in the offices at New York and Philadelphia has forced upon our notice, once more, the characteristic weakness of provincial operators to gravitate toward the larger cities. Some of our Canadian friends have returned recently to their northern homes in consequence of their disappointment on learning of the very slim margin between the salaries paid to new-comers and the cost of living; finding that they can do better in Canada than here. Of course, the return of the disgusted ones, who came here from the surrounding country and abroad, will do much to check the present influx, but they cannot explain matters to *all*, and it becomes, therefore, the duty of *THE OPERATOR* to sound a note of warning to those who are contemplating a change, and to advise them to keep their positions, unless they have, beforehand, an assurance of continuous and remunerative employment elsewhere. The experience of the past few years has demonstrated that young men who hold comparatively comfortable positions, become seized with an uncontrollable desire to seek their fortunes in the large cities; and, with this end in view, they vacate permanent situations, separate themselves from their closest kindred and dearest friends, feeling strong in the consciousness of their own integrity and a perverse determination to succeed, to present themselves, full of blitheness and hope, at the door of the general office in New York, Philadelphia, or Chicago, only to be chased away as grumbling beggars; they voluntarily leave vocations where the field is, at least, fallow, to come here and browse upon a desert. It is a common mis-

apprehension that something is always sure to "turn up" in the metropolis, and, burning their bridges behind them, by leaving fair positions to come here seeking impossible ends, they find themselves placed in an ignominious captivity in a large city and easily fall prey to the merciless cheap-labor hawks—victims to their own misguided ambition, and compelled, ultimately, through necessity, to accept any salary rather than return.

It should be enough to say that the late consolidation will displace a hundred, more or less, good operators in the city of New York alone; that there are dozens of applicants, at present, for every vacant position; that the so-called colleges keep their runners, drumming up students and tooting for the spare situations for their "graduates," and that, as they work so much "cheaper" than trained operators, economy-stricken managers are willing to hire them, and that insurmountable difficulties literally intersect each other in the path of a stranger.

Ambition is commendable enough, at a suitable time, but it is the step-mother of many a misery. Teasing Fate is a dangerous occupation nowadays, and, in practicing it, by one one little false step prosperity and promise may ebb away forever.

Better times are coming, and if we cultivate mutual reliance and act with confidence in each other, and unmelting unanimity, we will not find our resources squandered and our strength unriveted when we need them most.

We advise, for the present, our fellow operators to remain content with their lot, poor as it may be. Indeed the necessity at this time, for retaining a situation is so clear to all men of common sense that he who vacates his position deserves, we are tempted to say, very little pity for the misfortunes which are sure to follow; and he who is indiscreet enough to attempt to explore the bewildering vastness of New York, Philadelphia, Baltimore, or Chicago, in promiscuous quest of a better situation than he now holds, will do so at his own cost, and will be treated by Fate, in return for his labors, to a moving panorama of his own dreams fading away in the darkness of bitter disappointment.

Valedictory.

Mr. Johnston, who is now on his way home, and, doubtless, very close to New York, will assume entire control of *THE OPERATOR* immediately upon his arrival. Before relinquishing the management of our paper, I think it is my privilege to offer a word or two of explanation and of thanks to my fellow operators.

My position during the last four months, with all the hopelessly conflicting interests to be harmonized, has not been an easy one; the pain, to me, of speaking harshly of those who should be our friends has been very galling; and, although I have been aided—literally sustained—by the very ablest writers in our profession, and in whose ability I had every reason to confide, I think I ought to claim, like Mark Tapley, very little credit for feeling jolly on being relieved.

Many and tremendous changes have taken place during the past few months, involving the most vital interests of operators, directly or indirectly, in all of which *THE OPERATOR* has been found on the right side; and, while advocating justice and fair play to all alike, it has ever kept

sedulously to the main point: the elevation and purification of our profession.

Its contributors have been selected from the most scholarly and observant of our writers, and none other have been admitted to its columns; its opinions have been carefully weighed before their publication, and have been generously quoted subsequently both at home and abroad. It has uniformly abstained from publishing what may be called the official black list—in the conviction that there is a better way to reform a man than by advertising his failings—and the misdeeds of unfortunate operators, where such have occurred, have been charitably dealt with—by silence.

Much of the information spread before our readers has been written or collated and verified only through a great amount of careful research and toil; and, being fully conscious that an entirely successful accomplishment of the noble task of pleasing everybody is more than could reasonably be expected of mortal man (but having passed through the ordeal with some degree of *eclat*), I feel bold enough to demand nothing more lenient than a fair and candid criticism of *THE OPERATOR*'s course during the past summer.

To the entire permanent staff of *THE OPERATOR* a public acknowledgment of their valuable services is due; and, toward my distant friends, whose felicitous communications I have not already answered by mail, I shall have to take this method of returning my thanks to them collectively. Fraternally yours,

JOSEPH CHRISTIE.

PHILADELPHIA, Sept. 13, 1877.

DR. LYON PLAYFAIR, LL.D., nephew of the distinguished chemist, Sir Hugh Lyon Playfair, and himself one of the most famed of English scientists, is now visiting this country. Among the numerous high offices which Dr. Playfair has held, from time to time, that of Postmaster-General of England has identified him with the postal telegraph system of that country. Sir Robert Peel made him Chemist to the Museum of Practical Geology, and the late Prince Consort, in his untiring efforts to reward talent, called our distinguished visitor to positions of great honor. In 1858 he was appointed Professor of Chemistry at the University of Edinburgh, and in 1868 he was elected to Parliament.

MR. JOHNSTON sailed from Liverpool on the 6th instant, and is doubtless suffering all the annoyances of a series of equinoctial storms. "God speed the good ship!" say we all.

Themes for the Thoughtful.

Content is the sweetest state of opinion.

In good families good citizens are formed.

No good bargain can be made with the wicked.

It is bad to be vicious; it is worse to conceal a vice.

When the good assemble, they are in a fair way to grow better.

Indifference is the forerunner of mental decay, or the barometer of idleness.

A woman whose ruling passion is not vanity, is superior to any man of equal faculties.

Whatever stress some may lay upon it, a death-bed repentance is but a weak and slender plank to trust our all upon.

Contentment is a pearl of great price, and whoever procures it at the expense of ten thousand desires, makes a wise and a happy purchase.

"If Plugs Have Hearts Like Thee, Tom, Let Plugs Multiply."

I am a plug myself, but when I meet a man on the wire who is more of a plug than I am, I try to assist him, and when I gain his confidence he works much better. I try never to say an unkind word over the wire, which is more than some of our first class men can say. I think a good deal more work can be done in a quiet way than by blustering and scolding a poor fellow who is just starting out in life.

Yours, etc.,
TOM PLUG.

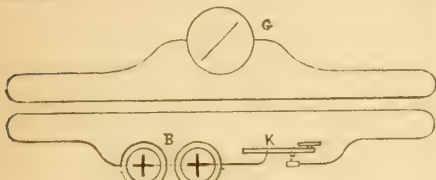
Scientific Department.

[This department is under the charge of Mr. H. Van Hovenbergh, 145 Broadway, to whom all communications relating thereto should be addressed. Mr. Van Hovenbergh will cheerfully answer here any queries pertaining to electricity, magnetism, or kindred subjects.]

INDUCTION. I.

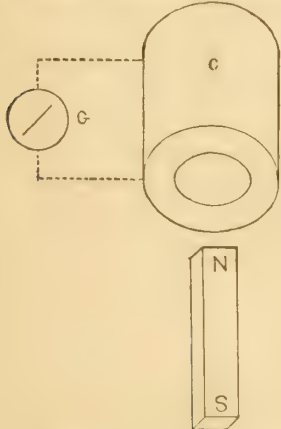
The most striking and beautiful experiments that can be made with electricity are the effects obtained by the use of *inductive* currents, or electricity of a very light character, produced either by induction, or friction.

When the fingers are placed upon the two screw-posts of a sounder, or the mainline posts of a relay, and the circuit opened, a slight shock is felt. This shock is the *inductual* current from the electro-magnet. When a battery only is used, without a magnet, or coil, in circuit, no such shock is observed. A shock would be felt when the battery circuit is closed, but not when opened. The nature of a simple inductual current is very easily understood.



G is a galvanometer, the coils of which are wound with fine wire. A wire is connected to its terminals and extended very near to, and parallel with, a wire from a battery circuit, B. When the key, K, is depressed, closing the battery circuit, B, the needle of the galvanometer will be deflected, for instance, to the *right*. It will instantly return to zero. Upon opening the battery circuit, the needle will swing to the *left*. These deflections are effected by the current *induced* in the galvanometer by the action of the current on the battery wire, on the wire of the galvanometer circuit. The reverse movements of the needle show that the currents produced were of different polarities.* This is the case with all inductive currents. A momentary wave of one polarity is produced, followed, upon any change in the conditions, by a wave in the contrary direction.

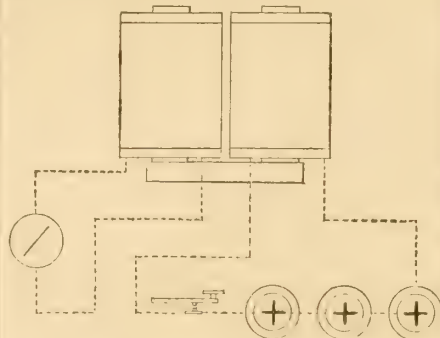
A similar effect is produced by this arrangement.



A helix, or hollow coil, C, is connected to the galvanometer, A. If a bar magnet, N S, (composed of a piece of hard steel, strongly magnetized) be

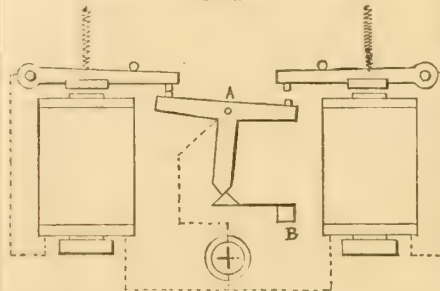
* A change of "polarity" is effected by interchanging the two terminal wires of a battery.

suddenly slid into the coil, the needle will be deflected momentarily, swinging as before in the contrary direction, when the magnet is withdrawn.



This experiment may be tried by any one who has access to a galvanometer relay and battery. The wires connecting the two coils are separated (care being taken not to break them), the galvanometer connected to one spool, and the battery to the other. The same phenomena as before will be observed. The only practical difference between this and the preceding experiment is, that in one case the magnet is withdrawn bodily, and in the other, the iron core is made a magnet when the battery circuit is closed, and demagnetized when it is opened. The same principle governs each.

ELECTRO-MECHANICAL MOVEMENTS. No 7.



The shuttle, pivoted at the point, A, shifts the battery current through the two magnets alternately. As each magnet closes, its lever depresses one end of the shuttle until its pointed extremity passed the sharp point of the spring, B. The circuit is then closed through the opposite magnet. This movement has been used in a printing telegraph.

Telegraph Wires Melted by Lightning.

A very severe thunder storm passed over London on the evening of July 5. Between eight and nine there came a very brilliant flash of lightning, followed by a deafening peal of thunder. Many people were stunned, and in several cases were found quite insensible. Immediately after it was found at Kilburn that the telegraph wires, running from the top of the Queen's Arms to a house about 300 yards higher up the Edgeware Road, were struck by the lightning, and fell in red-hot fragments, varying in length from six inches to an inch, all along the road, a great deal of yellow smoke attending the fall of the wire. This shows that ordinary telegraph wires are not probably large enough to carry heavy strokes of lightning with safety.—*Scientific American*.

Telegrapher's Paralysis.

The readers of our esteemed and valued contemporary, *The Journal of the Telegraph*, are troubling themselves about the "cramp," consequent upon many years of steady and monotonous work. It may interest them to learn that it is an affection of the brain, and not of the arm, if we can trust to the judgment of that eminent scientist, M. Bouillard. He recently gave an account of his researches in that direction before the French Academy of Sciences. He asserts that the three faculties which essentially distinguish man from other animals—speech, reading and writing—are each controlled by separate portions of the brain. In his researches he discovered that the paralysis of one of these functions could exist without the others being af-

fected, and he gives as an example a case in which he was called to a consultation on a young man whose avocations compelled him to write continually. At first the patient had felt a slight weakness in writing, then a great difficulty, and finally, an absolute loss of the faculty. The result of the closest examination could not detect any defect in the muscles of the arm or hand, the latter retaining all its sensitiveness and power for every other purpose than that of writing, and all his other functions being normal and in good condition. The conclusion arrived at was that the source of the infirmity must not be sought for in the external organs, but in the centre itself of nervous action—the brain. The young man was advised to learn to write with the left hand, which he rapidly succeeded in doing. The defect from which he suffered had long been known as writers' cramp, just as the loss of speech was for centuries termed paralysis of the tongue. Both designations were equally erroneous, both being now attributed to maladies of certain portions of the brain.

A Co-operative Telegraph Company.

The amalgamation of the Atlantic and Pacific and the Western Union Telegraph Companies is the most important event which has transpired in the telegraphic world for some time. These two great commercial bodies, who a few weeks ago were endeavoring to rend each other, root and branch, like deadly enemies, have now joined hands, and by so doing created the most gigantic monopoly known. The magnitude of this enterprise can scarcely be realized at a glance, but when it is considered that one corporation now controls the telegraphic communication of a country about three million square miles in extent, and containing over forty millions of inhabitants, its greatness will be apparent. All monopolies, however, tend toward venality, but as they are one of the outgrowths of our system of government, we suppose they will always exist. It has almost become a proverb that opposition to the Western Union can not exist, and if we are to judge from the number of companies which it has absorbed within the last fifteen years or so, including the American, United States, Bankers and Brokers, Southern and Atlantic, and the Atlantic and Pacific, besides others of minor importance, it may be set down as a fact that opposition can not and consequently never will exist in the ordinary nature of things. Time and time again have business men combined to secure cheap telegraphing, but just as often have they been baffled by the superior skill, experience, and means of those who are controlling this branch of industry for their own benefit.

There is, however, one plan which could be adopted with less expense to its promoters than any other and with better prospects of success. It is the formation of a co-operative telegraph company, to be controlled, managed, and operated by those immediately interested in its welfare. To be sure, the first thing to be thought of in the carrying out of such a plan is capital, but it is to be hoped that some person or persons philanthropically inclined, and possessing the requisite means, will take the matter in hand. There would be nothing to lose, as a debt might be created which could be paid off gradually with interest. Much of that pent-up feeling of dissatisfaction, the inevitable fruit of unjust dealing, lies under the calm exterior of the operating class to-day, and were such a scheme once started, hundreds of efficient and reliable electricians, operators, and clerks would fly to its support.

The plan above set forth is the only one which, in the opinion of the writer, can successfully compete with the great monopoly now existing, as there would be no dividends or enormous salaries to pay, and rates could be regulated upon a basis of reasonable working expenses.

IVAN.

EAVESDROPPING.—A railroad line in Nevada:

"H." calls "S. B." and is answered.

H.—"Is your ground wire on?"

S. B.—"Yes."

H.—"Examine it again."

S. B.—"It's O. K. Go ahead."

H, thus assured, sends a strictly private message to one of his female friends. S. B. gives O. K., and promises to attend to it himself, etc., when some unkind cuss east breaks in with:

"That ground wire don't work worth a cent; we heard it all."

And a deep silence ensued.

Kentucky Items.

MILLWOOD, KY., August 17, 1877.

TO THE EDITOR OF THE OPERATOR:

Seeing nothing in your valuable paper regarding our interesting road except some local news from Elizabethtown, I thought it would, at least, interest some of the telegraph employes directly connected to see themselves represented in a paper so well loved by every telegrapher from messenger up to superintendent. We have a line of one hundred and ten miles in length, employing fourteen of the most gentlemanly operators, including the train dispatcher, that the country can produce, of course, not bragging upon our own merits, or judging others by ourselves. In speaking personally of these gentlemen, it is but natural that we should begin at headquarters, where we find Mr. P. Stewart, the train dispatcher, busily engaged upon his several duties as master of transportation and superintendent of telegraph. To view one of his copies could not fail to convince the most fastidious that he was a thorough business man in other points as well as an operator. We fully agree with the ladies in nominating him for the handsomest man in the business from this State.

Mr. Stewart is ably assisted by Mr. W. W. Wheatly, who does night work in a manner which not only does credit to himself, but as the boys all say, "Art." Moving west over the road, through scenery unsurpassed by none, we find Mr. John Connor doing the amiable for L. and W., and P. and E. at Cecilian Junction. At Big Clifty we find W. T. Walker agent and operator. Grayson Springs is presided over by Mr. John O'Leary. Litchfield by G. R. Gray. Of Millwood we will say nothing, preferring to see ourselves as others see us. At Caneyville we find J. Schaffer. Horse Branch is patiently watched over by Mr. L. P. Raly. Beaver Dam by Jim McNickoll. Striking into the coal region we find Mr. Cully agent and operator at McHenry. Mr. Stoy at Rockport. Sutherland at Owensboro Junction. Ben Pearl at Greenville, and Messrs. Tim O'Leary, and Salvage. Of O'Leary we can say, although yet young in the business, he bids fair to make ere long a first class man in every particular.

We have not done our road line full justice, but for fear of occupying too much space in your paper, will close.

More anon. SEROOM.

A Telegraphic Daughter of the Regiment.

On the 22d ult., Mrs. Lizzie B. Soule, telegraph operator at the South Arlington (Mass.) station of the Old Colony Railroad, was made the recipient of a magnificent silver ice pitcher, presented by the Twenty-ninth Massachusetts Regimental Association, in token of valuable services rendered on the occasion of the annual reunion held June 18, 1877. By a mistake of the Old Colony Railroad officials some seventy-five Boston members of the association were left at South Abington, the train not stopping at that station. Mrs. Soule tried the wires and found them off, so no communication could be had with Boston. All waited patiently until late in the evening, hoping the wires would be all right. At last, Mrs. Soule, seeing no hope in that direction, volunteered to drive to Brockton and back, which she did, telegraphing from Brockton to Boston to Superintendent Kendrick, when a train was sent for the waiting members. On her return she was made a life member of the association, and at a late meeting of the executive committee of the association the above present was voted her. It bore the following inscription: "29th Mass. Regimental Association, to Mrs. Lizzie B. Soule for gallant and meritorious conduct, June 18, 1877."

MESSRS. L. & G. TILLOTSON & Co., through their Philadelphia branch house, in charge of Mr. Chas. McLaughlin, have just completed their contract for the construction and equipment of the new line from Philadelphia to Atlantic City for the Philadelphia and Atlantic City. R. R. Co.

The line is fifty-five miles long, first-class in all respects, and has ten offices. The work entire, including construction of line, laying cable at Atlantic City, establishing ten offices, etc., was completed under the personal supervision of Mr. McLaughlin, and delivered with everything in working order, in just seventeen days from its beginning. In this prompt and thorough execution of this contract, Messrs. Tillotson & Co. furnish good, practical evidence of their enterprise, and of the advantages to all parties concerned to be derived from superior facilities.

More Wreckers Ahead.

At a meeting of the managers of the Produce Exchange, held in this city August 29th, resolutions were adopted to the effect that if the telegraph companies do not afford the same facilities to the trade as were enjoyed before the late agreement, the various boards of trade throughout the country will be invited to combine in furnishing the necessary capital to establish an opposition line.

As will be seen by the revised tariff lists, the Produce Exchange have no cause for grumbling, but even if they imagined that they had, they will find a careful study of opposition lines for the past twenty years very profitable.

These new craft look very nice and tempting lying in dock, and even when they heave anchor, swing apeak and beat down the coast of telegraphdom, scudding along, under full sail, in smooth water and with flying colors. But it is only when they get fairly out to sea, with a crew made up of volunteer Produce Exchange men and "shanghai'd" capitalists, with a benevolent president of a board of trade for captain, and they find the cheap lugger heaving and pitching, keeling to port and careening back to starboard; when the topsail binnacle is blown to shreds, and the jib clew-lines parted by a gust of cheap-rate wind, and the mainmast is cut away by a lawsuit, that they will realize that it takes a telegraph crew to navigate a telegraph ship. And then when the astute financier who fancied that men of mess pork and lard could do it, finds his new clipper settling down in a thousand fathoms of "water," while the batteries of Wall Street bombard him with solid blocks of his own stock, he can lean over the taffrail and reflect on the jolly tar's explanation to Davy Jones when he reached that ancient gentleman's locker, and heard a remark about rough weather overhead:

"'Twas not the storm that brought me here
In Davy Jones's gaip.
But 'twas because my mate an' me
Sailed in a rotten ship."

Love's Labor Lost.

Did you leave that barrel of bluestone on the sidewalk?" said a ministerial looking stranger to the battery man of a large central telegraph office the other day. Mike had just begged off duty a half hour earlier, and had an important engagement to keep, but as he thought the polite stranger must be one of the directors, he apologized blandly, and said it should be attended to at once. Although he spoke so civilly to the bland-looking official, he swore in a shocking manner to himself, and, finding he could not lift the barrel, he got an order on the manager for a lineman to assist him. Monsieur Fogarty, the lineman selected, and Mike were three hours lugging it up to the fifth story, and they quarreled frequently on the way up, each accusing the other of not bearing his proportionate share of the burden. Mike explained this away by surmising that the supply department had put the new zincs in that barrel; and, when they arrived at the battery room and opened the barrel, they found that it contained nothing more than one hundred and seventeen paving stones (Belgian blocks), by actual count. Fogarty wanted to fight Mike, who was in that frame of mind described as "nothing loath;" but, after they had fought two rounds, both thought better of it, and they vented their wrath by firing the confounded stones out of the fifth story window.

Owing to the alacrity displayed by the passers-by in getting out of the way of the flying missiles no one was hurt, but the tavern keeper opposite wants to know who pays for his bulk window.

A CARPET BAG BY TELEGRAPH.—A German somewhat intoxicated boarded the Hudson River train at Kinderhook. He threw his satchel down in a corner of the car, took a seat, and was soon in the arms of Morpheus. On awaking he alleged that he had left his baggage at Kinderhook, and asked the boy employed on the train, what he should do to recover it. The latter, who had seen the German place his satchel in the corner, replied, "You give me 30 cents, and I'll telegraph to Kinderhook to have the depot master forward it by telegraph to Greenbush. It will reach there before we do." The German paid the 30 cents, gave a minute description of the missing property, and the boy departed, taking the satchel into another car. On reaching Greenbush the boy returned with the bag, and placing it in the Germans hands, said, "There's the first satchel I ever see come by telegraph." "Ah," replied the German, "dot de telegraf is vun great dings; here dake anoder quorter, mein poy." And the boy did."

Dashes Here and There.

At the railway station at Lyons, France, the new electric light has been successfully introduced.

Galvanic electricity was discovered by a woman, Madame Galvani, but her husband gets all the credit for it.

Seventeen people have been struck dead by lightning during the past summer, in different parts of the country.

A submarine cable is to be laid from Livingston, Guatemala, Central America, to Cape San Antonio, Cuba, 450 miles.

The total cost of an industrious operator at a high salary is less than the total cost of a negligent one at a low salary.

There are over eleven hundred women telegraph clerks in London, and only one of them has been dismissed in four years.

The Michigan Central Railroad has adjusted its wages table so as to reward with extra pay continuity and length of service.

Silk-worms hatched by electricity are now being reared in Italy. It is suggested to apply the same method to hens' eggs, and to hastening the germination of seeds.

A kiss, propelled with 40-widow power through the diaphragm of a telephone, was distinctly heard, and enjoyed, at the other end. Telephones, with vidual operators, are very popular in New York.

Just before leaving Boston for Europe, Prof. Graham Bell, of telephone fame, married the daughter of Gardiner D. Hubbard, a deaf mute. He had so carefully instructed her that she uttered distinctly all the responses of the wedding service.

Telephonic communication is being established at Ottawa between Lord Dufferin's residence, Rideau Hall, and the office of the Premier in the departmental buildings, a mile and a half away. Deacon Richard Smith of the Cincinnati Gazette, also keeps up communication, by telephone, with Mrs. Smith, at Clifton, four miles from the Gazette office.

"The Western Union Telegraph School" at Milwaukee, has been ruined by the Western Union Co., upon their attention being called to it, cutting out all their wires from the place. It has changed its name to "The Cream City Telegraph Institute." The interesting letter of our Milwaukee correspondent on the subject has been unavoidably crowded out of this issue.

To prevent the constantly recurring fires in the snow-sheds of the Central Pacific Railroad, the managers have devised a complete fire telegraph system, with an alarm box, every mile. Track-walkers patrol the road day and night, and when they come to a box, turn in a signal of safety or alarm, as the case may be. A lofty tower has also been erected on a mountain 10,000 feet high, commanding, with telescopes, a view of the line from Blue Cañon to the Summit, and from this observers will constantly watch the road, having telegraphic communication with the fire train at Cisco, which is always ready to set out for a conflagration.

THE Western Union Telegraph Company has opened a branch office in Butler Exchange, an arrangement which will prove a great convenience, not only to the numerous tenants of that building, but also to the public at large. The office is located in the recess adjoining the lower hallway, with Mr. Charles G. A. Peterson, formerly operator at Rocky Point, as manager. Charlie is well known as an active, pleasant fellow, who served his country faithfully during the late war as a lieutenant in the First Rhode Island Cavalry. In an engagement at Aldie he was captured, and for a long time was confined in Libby Prison.—Providence Journal.

WOMEN IN THE LONDON TELEGRAPH OFFICE.—The employment of women in the telegraph department has been a complete success in England. Over 1,100 are employed in London, and there has been but one dismissal in four years. Their hours of work are from 8 A. M. to 8 P. M., each being on duty eight consecutive hours out of these twelve. In the establishment there is a kitchen and dining-rooms, and the girls have a thoroughly good dinner for twenty cents. The pay begins at \$2 a week, which is raised to \$3 when a girl is competent. Girls may enter from fourteen to eighteen. The average pay received is \$4.50 a week, and the highest is \$7.50 a week. A clerk who has worked for thirty years at \$7.50 would have \$3.75 a week pension for life.

BOLD ROBBERY IN MARYLAND. On the night of August 29th, a number of masked men entered the telegraph office at Canton Junction, near Baltimore, one of them presenting a pistol at the head of the operator, Mr. James Moan, and demanding his money. The telegraph station was remote from any other house, and Moan knowing it was impossible to obtain assistance, deemed discretion the better part of valor, and reluctantly complied with the demands of the highwaymen. He had \$2.75 in his pocket, and taking two of this amount he handed it to the fellow, who meanwhile was apologizing and telling Mr. Moan that he was sorry to be compelled to commit such an act, but that his necessities demanded it. During the time this highwayman was dealing with Mr. Moan, his companions were searching the office. While they were thus engaged, the man who had the pistol, and who appeared to be the leader, said to them, "Don't take anything valuable," which order was obeyed. No violence was offered or attempted, and the robbers seemingly satisfied with the result of their venture, departed.

VARIED, RACY, AND FRESH.—By reason of their numbers and the high average of their intelligence, the telegraph operators of this country form a class by themselves, for their profession has the effect of binding them together into one body, and, as a consequence, of fostering among them that *esprit de corps* to which education has made them sensitive. Thus they support a paper exclusively technical, and give it a circulation of—we are afraid to say how many thousand—and thus has been brought about the publication of the book now under notice. It is made up of contributions from many writers, the great majority of whom belong to the craft, and its illustrations, which are numerous and spirited, are the work of professional talent. As a matter of course, the book mainly appeals to the telegraphic reader, the anecdotes it relates are such as he will best appreciate; the situations it describes, the terms it employs, are such as the humor and fitness of which will find the readiest echo in the telegraphic bosom. But the lay reader, while he may be at a disadvantage, can not for all that fail to find much hearty enjoyment in a perusal of "Lightning Flashes." Its contents are so varied and racy and fresh. In reading the book one feels that it is written by those who know, who, in vulgar parlance, have been there, and speak from actual knowledge. This lends the book a power and vividness peculiarly its own, and which should commend it to an intelligent public.—*Phila. Inquirer.*

"Now Look ye Where He Lies."

ROCHESTER, N. Y., August 17, 1877.

EDITOR OPERATOR:

Allow me to correct "Echoes from 197." I have not been in "Central Pennsylvania," or any other portion of it. I never "sold soap" in all my varied existence (though I have bought and used considerable) but if I had, I beg to say, it would have been the very best soap that our very best chemists could have produced, without any "lye" in it. This is only one of numerous "Echoes" to which my attention has been called, all of which are as far from the truth as this one. But this is scarcely worthy of notice, only, that like Jacob Just:—

"And, then, just when the brunt of battle o'er,
And Peace displayed her Olive Branch once more,
I, like another Cincinnatus, then
Returned content to hold the plow again;
And refused requital, seeking but the charm
Retirement gave me, on my country farm."

I would prefer to be let alone; or, if I must be dragged up to fill the vacuum of "Echoes" column, let him, at least, be generous. BOOY.

Quarterly Report of the Western Union.

The Western Union Telegraph Company has just issued its quarterly report for the quarter ending September 30. According to the last quarterly report there remained a surplus of \$128,597.10. The net profits for April, May, and June were \$666,581.46. There was also another item of \$45,037.12 for material and supplies on hand and paid for, but not included in the surplus, which made the total amount \$840,195.69. From this is deducted expenses, \$765,109.91, leaving a surplus in July of \$75,085.78. The construction account for that quarter is set down at \$121,053.54. Adding the surplus of July 1 to the net profits for the quarter ending September 30, based upon official returns for July, nearly complete returns for August, and estimating the business for September, the whole amount will be about

\$867,186.70. Deducting the quarter's interest on bonded debts, the proportion of sinking fund for same period, and a dividend of one and a half per cent on the capital stock, the surplus for the present quarter is put down at \$209,261.20.

Echoes from 197.

Charley Howlitt has the hay fever.

Mr. Cherry has resigned and gone to Montreal.

Charley Jennings has returned from Long Branch. R. G. Stephenson now works the Savannah and Charleston wire.

Miss Alice Wheeler, of Westfield, Mass., is visiting in Brooklyn.

Emma E., wife of David McKeen, of this office, died in North Sydney, C. B., August 25th.

Mr. Yackley has resigned and gone to California, to engage in other business. We wish him every success.

Gus Coleman and Johnny Young have been put on the 12 to 9 trick for being late. Fred Catlin barely escaped.

Moralizing on the changes incident to life, causes Dennis Brown to remark, that when a boy he used to draw ships on his slate, but now he draws "schooners," and has 'em put on the slate.

H. L. Granzow has gone east for a six weeks' vacation. His place on the Baltimore quod is filled by Frank Lowery, who is in turn represented on the Western Press, nights, by Harry Henry, who resigned last spring.

Willie Edouin, of the Lydia Thompson Company, now playing at Wallack's, visited a number of his old telegraph friends at the office last week. He wishes through THE OPERATOR to be kindly remembered to Johnny Walker and Johnny Clark.

William Cunningham, of the mailing department is to have a testimonial benefit rendered him by the Enterprise Dramatic Association, (principally composed of employees of the Western Union main office), at Turu Hall, East 4th Street, Tuesday evening, September 18, 1877, upon which occasion will be presented the three-act drama of the "Idiot Witness," preceded by the roaring farce of "Jumbo Jum." Tickets 25 and 50 cents.

Answers to Correspondents.

E. E. P.—No.

PERSONALS.

Miss Belle Perry, an accomplished young lady, has been appointed operator at Salina, Kansas.

General Mahone, who came near securing the Democratic nomination for Governor of Virginia, began life as a railroad brakeman.

S. H. Clark, of the B. and A. R. R., State Line, Mass., is going to his home at Waterbury, Conn., on a few weeks' vacation. We wish him much enjoyment.

Mr. Tracy Barnes, of the C. and N. W. Ry, Clinton, Iowa, paid us a flying visit on September 1st. He expressed himself as being highly delighted with his trip to the East.

C. E. Townsend, for the past three years operator at Marinetta, Wis., has accepted a position with the Western Union at Rockport, Texas. He has the good wishes of all his friends north and south.

C. G. MEEKER (salary \$70), of Atchison, Kansas, is organizing a TELEGRAPH COLLEGE; consideration \$15 a head. As soon as the ILLUSTRIOUS PLUGWRIGHT gets himself into the usual difficulties we will accord him the use of our columns for FREE advertising.

During the recent illness of Mr. Carey, the telegraph operator at Martinsville, on the Jackson Railroad, the office was managed entirely by Miss Mollie Short, who is only ten years of age. She sent messages and trains, and received orders for conductors from the train-dispatcher's office in a very creditable manner.—*Oyster (Miss.) News.*

OREGON PERSONALS.—F. T. Albee is subbing for James Fish, at St. Joseph, Or. L. L. Williams is agent and operator at Hillsboro, Or., and also running the warehouse for the Hillsboro Warehouse Co. W. S. Ward, at Di ol's, Portland, is General F. and P. agent of the O. C. R. R. C. D. Failing, at C., is train dispatcher for the O. C. R. R. and O. and C. R. R. The W. U. offices at Olympia, W. T., burnt, August 8.

L. G. Burnell is agent and operator at Des Revières, Que. J. McCambridge fills the same position at St. Alexander, Que. Wm. Morgan is agent at Stanbridge, and H. Ross is operator. At St. Armand G. A. Hunt is agent and J. M. Ferris, night operator.

N. O. and M. R. R. PERSONALS.—Mr. E. M. Wallace, chief operator and train master, is North, on a visit to friends and relatives. Shouldn't be surprised if some one of the fair sex doesn't capture him before he returns. *He's very handsome, and is not married.* Col. C. K. Delappes is filling Mr. Wallace's place during his absence. "De" is "lightning" on "12." The immaculate W. Parham holds forth at "Ba" for the present, and *does not know* how to flirt with the girls. Mr. E. W. Wright, formerly operator at West Pascagola, has been appointed agent and operator at East Pascagola, *vice* Harrison.

Sergeant O. S. M. Cone and an assistant named Murphy occupy the Signal Service station at the summit of Mount Washington. On the 16th of December last they had a gale from the northwest blowing 182 miles an hour; the thermometer stood at 40 degrees below zero in the living room, where there are two great stoves, and in the next apartment at 70 degrees below zero; the gale was so loud that the men could not hear each other, and under its pressure of 153 pounds to the square foot the building, though triple sheathed, anchored, and bolted to the rock and braced by timbers a foot square, rocked and quaked till the inmates feared it would be blown away. Last winter they used sixteen tons of coal, which costs, delivered at the summit, from \$47 to \$65 a ton.

MILWAUKEE PERSONALS.—Master Ned Hickey, our bright little check boy, has been promoted to the position of operator. Ned is only thirteen years old, but he's the smartest little fellow we have ever met. It is really amusing to see the little chap sit down and take a message with the ease of an old operator, his head scarcely reaching over the desk. He is destined to be a bright star in the operators' firmament in the near future. Night manager C. F. Burdick returned home on the 15th after a ten days' sojourn among the sceneries of Lake Superior feeling greatly recuperated. Billy Hall started on a trip to Ashland, Wis., 16th prox., returning on the 20th. Eddie Patterson officiated during his absence. Ed owns a yacht in Madison, which is reported to scoop everything out there. Last week he entered her for the regatta at that place, and was feeling happy over the thought that \$75 would be easily won. The day came, but the lucre did not, and Ed is melancholy. He says:

Mortal man is both for sorrow,
Alive to-day and dead to-morrow.

That's the way with the wind. Mrs. Cannons man "Pete" sends night report every evening from six to ten p.m. The old lady says it keeps the old chap out of mischief. The boys call Billy Plant "Charlie Ross." Parker, Harrigan, Maher, Nicand, and Ingle are the latest additions to our staff. Miss Ella Dorley presides over the destinies of Fountain Spring House, at Waukesha. Miss Julia Williams, besides being operator at Palmyra, is also correspondent for the *Evening Wisconsin*, an evening paper published in Milwaukee. Ted Sweet, since his debut as manager of Plankinton House office, has by his gentlemanly manner and pleasing disposition made a host of friends. Each day continues to add new ones.

MARRIAGES.

WESTERN UNION—ATLANTIC & PACIFIC.—On August 20th, at the residence of the bridegroom, 197 Broadway, Western Union, Esq., to Miss Atlantic & Pacific Telegraph. No cards. Presents exclusively in cash.

RILEY—LE GRAS.—Sept. 5th, at Chattanooga, Tenn., by Rev. Father Ryan, Mr. J. F. Riley to Miss Louisa C. Le Gras.

BIRTHS.

September 2d, 1877, to E. M. Brandenburg, of the U. S. Signal Service, Philadelphia, a son. First edition.

DEATHS.

NORTHROP.—At Jacksonville, Fla., August 30th, Mrs. Clara M. Northrop, aged 44 years.

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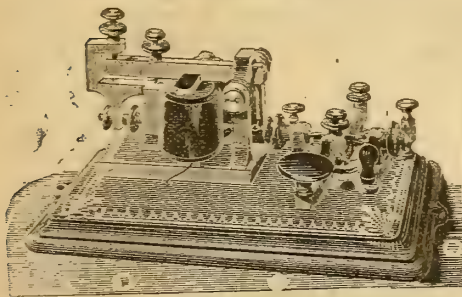
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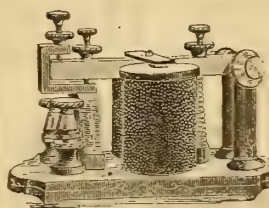
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The OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

VOL. VIII.

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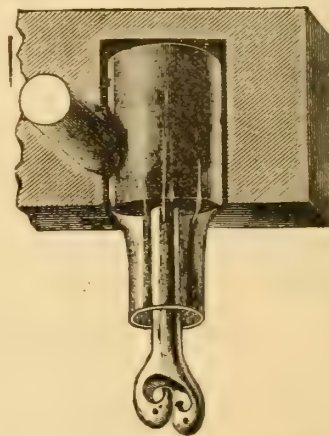
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THE OPERATOR

A JOURNAL OF Scientific & Practical Telegraphy

October 1st, 1877.

Volume VIII.

Whole No. 87.

A Sad Tale.

Where Cahoka's peaceful waters lie
Upon their granite bed,
There dwelt a youth—nay, do not sigh,
He now is with the dead.
He died not of tumultuous grief;
He died not of *ennui*;
He died not, like the fallen leaf,
Of premature decay;
He died not of a broken heart;
He died not of remorse;—
He died, the victim of an art
Whose subtlety is force. * * *
He died because he'd rather be
An angel, winged and shod,
Than live on earth in misery,
And have to work a quad!

Three Friends.

Lou, Ada, and Allie.

I wonder why my thoughts turn so persistently to these three friends this drowsy summer afternoon. And yet I need not be surprised that it is so, I loved them each so dearly. What air castles we used to build in the "olden, golden days" of school life! We gave no heed to the thought that they would surely topple and fall as the years advanced.

Lou loved painting and drawing, and was to show the world a wonderful female artist. America should point her out as one of its renowned ones, and the Old World should acknowledge and pay homage to her genius.

Ada was fond of writing brilliant compositions, and spoke confidently of the time when a book, which would make her name a familiar household word, should be published. Dickens and Macaulay were to have a most formidable rival on this side of the Atlantic. No moderate fame would satisfy her; she was to shine a "bright particular star" in the literary firmament.

Allie was certain she could sing her way to fame, and when I listened to her rich, sweet voice I believed that her bright dreams might be realized. The music-loving ones of earth should spread garlands at her feet, as rich and plentiful as ever told the triumphs of grand Parepa Rosa or sweet Jenny Lind.

Dear Lou! When the thoughts of fame were weighed in the balance with love they were "found wanting" in all that satisfies the heart, and the little god was triumphant. To-day she takes more delight in reading over, or listening to, one of the well written sermons of the young clergyman who led her to the altar four years ago, than she ever expected to experience in gazing on her world-renowned pictures. Her life-work is being performed nobly and well. She is a faithful wife and mother—for a baby boy now lisps his infant prayer at her knee—and I feel that, although she has not reached the goal she once saw in the distance, she has found that which is more precious than fame could ever become, and is satisfied.

Happy Ada! That is what the world calls her, and why should I say the appellation is a misnomer? She is the petted child of fortune, the darling of society. The rich and the fashionable consider her company something to be sought after, and to prize highly when won. But her world is not my world now. My little office is but a poor place for her to trail her silken robes in, and my unpracticed eyes can not tell the names of many of the precious stones which serve her as jewelry. A time may come when her old friend's hand can remove some obstacle from her pathway. Then how eagerly will that hand be stretched forth! Perhaps when she has seen the hollowness of the regard which wealth can purchase she will remember her old schoolmate. Until then—will the time ever come?—I can only love and pray for her. Her book may yet appear, and it may prove a much nobler work than as if it had been

written before she knew aught of the world beyond the circle of home and school life. God grant it may be so!

Sweet Allie! I doubt not the angels in heaven listen to the songs you were never permitted to sing on earth. The grass is growing fresh and green on a grave in the lonely, lonely little cemetery not far from the home she loved so well, and on the marble slab at its head her name is carved.

How the old heartache comes back to me as I recall the day when they laid her down to sleep! Like "little Nell," she seemed like a creature fresh from the hand of God, and waiting for the breath of life, not one who had lived, and suffered death. Who shall say she, at least, is not happy?

I have made other friends, and they are ever true and kind, but these three must always seem different from any I may make or have made.

My signal is sounding. Good-bye for the present, old memories! My work is in the present, however often my truant thoughts go back to the past.

L. A. CHURCHILL.

The Return Voyage.

Thursday, September 6th, was quite a gala day in Liverpool. I suppose you will think it was on account of my sailing that day on my return trip. But that wasn't all. The Mayor, Mr. Walker, had presented the city with a \$200,000 Art Gallery, and it was opened that day with appropriate ceremonies. The weather was delightful. There was a grand procession, bands playing, joy bells ringing, flags flying, and a gay time generally. The Adriatic, on which I sailed, so far sympathized with the festivities ashore, as to display about fifty flags from her rigging.

It is rather a coincidence, by the way, that when I left New York a brass band played farewell airs as the Berlin bore away from the dock; when we reached Queenstown a regatta was in progress, and we landed amid more music and gaiety. Now in Liverpool, on the return, history repeats itself, and even on the deck of the "Adriatic" out in the Mersey, the delightful strains of music reach our ears. The weather was also pleasant the day we left New York, pleasant when we reached Queenstown, and pleasant leaving Liverpool.

We weighed anchor at six o'clock in the evening, and reached Cork Harbor at 11:15 following forenoon. In exactly an hour the Irish passengers were embarked, and the "Adriatic" was under way again. We passed Fastnet Lighthouse at 5 p. m., and lost sight of land in the gathering darkness, a couple of hours afterward. The weather up to Sunday was delightful. That afternoon, although the sea didn't appear to be unusually rough, the "Adriatic" labored heavily through the water, and most of the passengers were seasick. The pitching continued until about midday Monday, when everything became calm again, and the seasickness was forgotten. The wind now turned ahead, but the weather was warm and pleasant, and the "Adriatic" ran very steadily, and seemed to make good progress. We were all enjoying ourselves so much that the time passed very pleasantly, and without anything of special feature until the following Friday night at nine o'clock, when we took up the pilot. We judged from this that we were nearing land, and then some of us felt half-sorry that our vacation was so nearly over, and that we must so soon go "back to busy life again." It was most delightful on the water that night, the sea being extremely smooth, and the moon shining brilliantly. Saturday was a splendid day also; the sea was still smooth, and the weather warm. Between twelve and one, however, it became quite foggy, which somewhat lessened the pleasures of the day's sail.

About five o'clock we passed the outward bound fleet of ocean steamers which left New York that morning, and fifteen minutes afterward caught the first glimpse of land. About ten p. m. it again becoming very foggy, we cast anchor outside the bar. At midnight we once more pushed forward, and an hour after cast anchor off Quarantine. Here we curiously enough found a Guion steamer, which left Liverpool on the Tuesday, my old friend the "Spain," which left on Wednesday, and the "City of Chester," which, like ourselves, left the same port on Thursday, all waiting for daylight to land their passengers. The "City of Chester," of the Inman Line, left Liverpool a few minutes before we did, and until they reached Queenstown, both steamers maintained precisely the same relative positions, the "Chester" being slightly ahead. She did not get away from Cork Harbor as soon as the "Adriatic," however, and we did not see her again until that day week,

when she was noticed a little north of us, steering toward the Western world as deliberately as could be. Until they reached New York, both vessels were hardly ever out of each other's sight, which is something unusual, for once you lose sight of a steamer, which you generally do the first day out, it is very rarely, indeed, that you catch a glimpse of her again until you land. We only passed about half a dozen large vessels during the voyage. Several times we saw pretty large whales, rolling lazily about or spouting the water in the air. One of them was not more than ten yards from the "Adriatic," but he didn't seem to notice our presence one particle. On another occasion fully two hundred dolphins seemed to be playing "tag" all around the vessel. One or two ambitious ones attempted to try the "Adriatic" a race, and really acquitted themselves very creditably.

About seven o'clock on Sunday morning we proceeded to the White Star dock, pier 52. Our baggage, after examination, was handed over to expressmen, the passengers proceeded to their respective residences, and the journey to Europe was over. I had been away exactly three months and a half, had met with no accident except the slight one on the "Berlin," had seen many strange and interesting "sights," had enjoyed splendid health during the entire time, and had had a good time generally, yet I felt glad to get back. If I were asked what was the pleasantest sight I had seen since I left, I think I should say: Staten Island, with New York in the distance. Strange, that although people may have an excellent enough time abroad, they always feel a kind of solid satisfaction at getting back, and renewing their acquaintance with old friends. At any rate, I did.

W. J. J.

Women as Telegraphers.

The New York *Sun*, in its issue of September 16th, publishes an interesting interview with the operator at one of the large hotels in this city. We fear the lady—who is described by the reporter as "black-eyed, sweet-voiced, about twenty-five years old, bright, quick, and talky"—is a little severe on her male colleagues. She talks sprightly, however, and her remarks will doubtless be read with interest by telegraphers generally.

"Well, it's better than sewing or making shirts for a living, any way; and besides I have a chance to know what's going on in the world."

"What are your hours?"

"I get here at eight in the morning, and stay till half-past eight or nine. They want me to stay later, but I couldn't stand it. It's awfully trying, any way."

"But why get here so early as eight? Does anybody send messages as early as that?"

"Bless you, yes. I often find two or three on my book when I get here. I have sometimes thought it would be a good idea to open at half-past seven in the morning, and close at eight p. m. sharp, but the manager wouldn't consent to it. You see, like all lady operators, I am very anxious to please the company. You know how hard we had to work to get anything to do in the first place."

"No, I don't know anything about it. Tell me."

"Why, when the Western Union first gave a country office to a lady manager there was such a howl of indignation from the men as would have done credit to a menagerie of hyenas. Any one would have supposed they owned the lines and were the sole proprietors of quick fingers. Later on, when they began to try us in the city here, the silly fellows actually talked of getting up a strike. I wish they would do it now. We'd soon show them that lady operators can be depended on at all times."

"But they say you are careless in reading messages."

"Who—I?"

"No, no. They say women are less reliable in reading than men. How is it?"

"That's nonsense. A careless man is as bad as a careless woman. What difference does it make to you whether your message is wired by an operator in pants or in gown, so long as it's wired right?"

"Exactly, and that's the point."

"Well, point or no point, I know men who are careless and ladies who are correct, and I should think it very silly to condemn the one and praise the other sex simply because single operators were either bad or good."

"What effect has the employment of women had?"

"It has had three good effects. In the first place the companies are no longer at the mercy of a lot of selfish men. Why, do you know the operators used, literally, to tyrannize over the companies?"

They'd do just so much work, and no more. Why, they used to let messages accumulate and pile up so that the manager would be in perfect despair. You don't hear so much independence talk now-a-days."

"So you think the companies are benefited?"

"Certainly, and then the stockholders are, or should be, for you know so long as men control the money chests women will never be overpaid. The men who throw away hundreds and thousands at home, are not at all sensitive about paying starvation wages to girls in their employ. Not that we have starvation wages by any means; but telegraph pay is very much less now than it would have been if accident hadn't demonstrated the peculiar fitness of women for the nicest kind of telegraph work. I claim that our ears are quicker, our fingers more useable."

"Well, what is the second point?"

"The second point is that thousands of women are able to earn an honest living. Take my case. My husband was killed at Antietam. Because his discharge was made out, and he fought as a volunteer a week after his time was out, I can get no pension. My babe was born two weeks after her father died. I had no parents and no near relatives. What could I have done? I went to President Orton. He knew my father. He gave me an opportunity to study. I was quick, and my baby's needs stimulated me, you can well believe. I felt that I was in the way, but I kept at it, and thank God to-day that I'm as independent as Mr. Orton himself, so long as my health lasts. Could I have sewed? Not and lasted till now. Nor could I have endured the terrible wear and tear of a store. This field is just the field for women who are willing to make themselves useful. All along the lines of railroad and telegraph hundreds and thousands of women are saved the degradation of marriage without love, and have opened to them a door for self-respecting industry."

"And the third point?"

"You'd never guess it. I contend that we have made men out of monkeys. Why, sir, you have no idea of the way in which male operators used to pass their idle time. I have heard messages passing over the wire which would make a brass dog blush in his sleeve. The messages they used to send were disgraceful. If the management had known a tithe of what we girls used to be compelled to hear, it would have broken every male operator on the line."

"How is it now?"

"All changed. Once in a while a private flirtation is carried on. Now and then a rough story is told. But altogether, the service is reformed."

"Do you think you interfere now with male operators?"

"Of course we do. That's inevitable. Wherever a lady is employed, the number of places for the lords of creation is reduced. But we can't help that."

"I suppose you come across queer customers now and then."

"As a rule, everybody is queer. It's a bad place for any one who has faith in human nature. I see so many lies written, come across so many coincidences of deceit, that I really think I'd believe everybody was bad if I didn't know better by experience."

"Do you always read messages for sense?"

"I can't say that I do. It would be useless, for a great many have no sense to any but those concerned. No, I make it a rule to read messages literally, and before the writer leaves the desk. If you telegraph 'Two and two make five,' it's not my place to tell you they make four. I did that once. A tall old man, with a cigarette in his mouth and a tremendous weed on his hat, gave me this message: 'The Fall River boat leaves the foot of Twenty-Third Street at four. Send the donkeys by mail.' I said, 'You're mistaken, sir; the Fall River boats leave the down-town pier at five o'clock, not four.' I never shall forget the look he gave me. Said he: 'Young woman, you tend to your business, and I'll tend to the Fall River boat.' After that I'd have sent the Bible backward, and called my baby a bear if a customer so wrote it on the blank."

"Do you ever have very long messages?"

"Yes. One day, or rather one night, I sent five messages, each over 800 words, to *The Sun*. Jay Gould's Secretary sent 1,500 words to Washington, and I often have city messages of 600 or 700 words. I sometimes think it would be quite as well if the senders were to hire a district messenger; but that's their business."

"How about women customers?"

"I have very few. Now and then one comes in to send word about dinner or the theatre to her hus-

band or friend down town, but I don't have many. There's one nice dumpling of a girl who is possessed about matinees. Regularly every Saturday, about noon, she comes in and sends word to a gentleman in Beaver Street. 'I shall be at such or such a theatre matinee. Don't fail to come.' She always pays, says 'now send it quick, won't you?' smiles and runs off to her coupe like a little rabbit. One day, not long ago, we had seven or eight West Point cadets here, and you'd have died to see those boys act. If they sent one, they sent twenty messages apiece. Some they sent to the Point, some to Brooklyn, some to young ladies, some to tailors. Oh, it was too funny for anything. I deliver many a love-sick message. Some fellow down town hasn't seen his 'birdie' since the night before, and he must know how the darling is. Now and then they write for their friend to drive down to the office at four. Any number of dinner appointments and theatre engagements are made. The queerest thing of all is the carelessness of the people who write the messages. Don't talk to me about operators. Why, bless my heart, if we were to make one mistake where they make fifty, we'd be turned adrift in no time. The man sent, 'Send me a dozen eggs.' His correspondent asked to have it repeated. I repeated it. He, supposing it a joke, sent the eggs. I was hauled up. I showed the copy. He meant a dozen engravings, and 'supposed the operator would know enough to make engravings out of eggs'—the word he wrote. They write absurdly, and in their desire to save two cents leave out a word that is essential to the meaning. Half a dozen times this summer men have telegraphed to their wives, 'Meet me at Coney Island boat,' but as they didn't mention boat, time, or pier, they doubtless went alone—probably they meant to all the time."

"What improvements would you suggest as an easing of your lot here?"

"Well, I think it would be a good idea if the hours were different. If the offices were to open at eight in the morning, and be kept open till ten P.M., two operators would find profitable employment for the company. For instance, I could stay from eight to three, and the other from three till ten, or *vice versa*."

"What do you do in the idle time?"

"Read and write. Here's a story I've just finished. I wonder if I could have it printed? Too long? Do you think so? And here's some poetry—'A Glimpse into the Future; or, Our Land in 1990.' Now don't laugh; why shouldn't I try, as well as any one else?"

"You should."

"A woman who telegraphs has to do a great deal of thinking. She thinks when a customer comes in and when he goes out. His message is a text for more thought, and queer messages need curious fancies. It's a pleasant life, after all."

The telegraph authorities, adds the reporter, by way of comment, say that women operators are of great advantage, but they will get married. Just as soon as a woman develops into a first-class operator, she's too smart to be contented with her sphere.

The N. Y. Wire Club.

"Master, I marvel how the fishes live in the sea? 1st. Fisherman: 'Why, as men do a-land; the great ones eat up the little ones.'"

"When such things occur they make other hearts ache," remarked an A. and P. operator, with a sad smile. [A voice: "Are you a bread and water man?"] Up roar.

The chair, Chauncey Raymond, rapped sharply for order. He said he had been spending several months in the Adirondacks, and was rather rusty in Parliamentary tactics, for which members must make allowance. He hoped, however, that business would proceed promptly.

Jerry Boren then took the floor, and said: "I am proud of the privilege accorded me to address so large and intelligent a body of men. Since our last meeting we have passed through a critical period—in fact, I had a very narrow escape from imminent peril myself during the burning of the switch in the office, and I owe a lasting debt of gratitude to Dwight Case, and Dennis Brown for their prompt and heroic conduct on that trying occasion, when the young operators had become demoralized." [Applause.]

Morris Brick remarked that it was a curious fact that all eminent men had marvellous escapes. Several years ago John Lenhart narrowly escaped being precipitated from the fourth story of 145 Broadway. [Laughter.]

Mr. French: "Business lately has been very heavy. That great railroad strike was a mistake; the em-

ployés did not properly appreciate the kindness shown to them." [Signs of dissent.] "Another thing, many of the employés were overpaid." [Cries of Oh! Oh! and confusion.]

Gus Coleman: "Perhaps some of the gentlemen present are practicing the economical ways of the poor Irishman who was paid two dollars and fifty cents per week. His 'whiskey was five cints a glass, and a pace of poi three cints.'" [Laughter.]

Mr. E. T. Welsh called attention to the interview between a lady operator and a reporter, which appeared in the *Sun* of Sept. 16, in which male operators were denominated hyenas. She was a widow of twenty-five, and had lost her husband at the battle of Antietam—married early in life, apparently.

Mr. Bradt: "What does she sign?"

Mr. Welsh: "I don't know, but I think her front name is Elsie." [Laughter.]

The name evidently strangely affected Mr. Bradt, for he blushed deeply.

Mr. Lambdin: "I am authorized by the ladies to say that the interview referred to does not reflect their sentiments."

After Mr. Lambdin's maiden effort he rubbed his upper lip vigorously and sat down.

Mechanical engineer Bob Morris: "Our church in Brooklyn will shortly give an entertainment, in which I am to appear in my great character of King Lear. Tickets 25 cents. I hope all here will then be present. It is a much more beneficial way of investing money than buying 'schooners' of beer."

During Mr. Morris's theological remarks Mr. Kraft and Dennis Daly were discovered diligently studying a revised copy of Hoyle, and were promptly ejected by sergeant-at-arms Denny Harmon.

Paul Sheehan: "I am glad Tom Allen is absent this evening. Whenever he reports the club meeting he always puts in something about myself and Gilly Olmstead singing duets. I am a pretty good singer, but Gilly can't sing at all." [Laughter.]

Miles O'Reilly: "I will now render in my best style, 'The Harp that once through Tara's Hall.'"

John Moffatt: "Oh! that's the new song just out."

The sergeant-at-arms told Mr. Moffatt that were it not that those present were on the eve of adjournment he would eject him. Mr. O'Reilly then filled the hall with silvery sounds, and the meeting afterward adjourned.

Prof. Bell's Telephone.

Mr. W. M. Preece, the English Postal Telegraph engineer, who was recently in this country examining the American telegraphic system, delivered an interesting lecture on the telephone at a recent meeting of the British Association at Plymouth.

It is quite evident, he says, that Bell's telephone is limited in its range. The currents operating it are very weak, and it is so sensitive to currents that when attached to a wire which passes in the neighborhood of other wires, it is subject to be acted upon by every current that passes through any one of these wires. Hence, on a busy line, it emits sounds that are very like the pattering of hail against a window, and which are sometimes so loud as to overpower the effects of the human voice. Mr. T. A. Edison, of New York, he goes on, has endeavored to remedy these defects in Bell's Telephone by introducing a transmitter which is operated by battery currents whose strengths are made to vary directly with the quantity and intensity of the human voice. In some experiments made with Edison's telephone, songs and words were distinctly heard through 12,000 ohms, equal to a distance of 1000 miles of wire. Bell's telephone is in practical use in Boston, Providence, and New York. There are several private lines that use it in Boston, and several more are under construction. Mr. Preece tried two of them; and though he succeeded in conversing, the result was not so satisfactory, he says, as experiment led him to anticipate. The interference of working wires, he thinks, will seriously retard the employment of the apparatus, but there is no doubt, he adds, that scientific inquiry and patient skill will rapidly eliminate all practical defects.

Prof. A. Graham Bell then delivered a lecture on the discovery of the telephone. He says it has been evolved from a consideration of the mechanism of the human ear, and at present is merely in an embryo state. Prof. Bell denied that a full concert had been heard through the telephone, but said that a telephone had been placed in the midst of a brass band, the wire from the telephone passing to his laboratory. In listening he heard the men tuning up their instruments, and finally he could distinguish the playing of the full band, only the notes

were out of proportion, the lower notes being the louder. He telephoned the leader of the band, and requested him to place the higher cornets nearer the instrument, and then he was enabled to hear the full harmony of the brass band, about two feet from the telephone. It was true that a speaker or singer could be recognized by his voice. He could at once recognize the voice of a friend after he had become accustomed to the particular modifying influence of the telephone on the voice—at least, where the articulation was marked.

Referring to the above lectures, the *London Telegraphic Journal* aptly says that it is interesting to remark that the last time the Association met at that place (Plymouth), in 1841, under the presidency of Dr. Whewell, the telegraph was little better than a promising experiment, and the first submarine cable, that between Dover and Calais, was not laid till nearly ten years after.

Daring Robbery on the Rail.

A band of highwaymen attacked the Union Pacific east bound express train at Big Springs station, between ten and eleven o'clock on the night of September 18th, took possession of the telegraph office, overpowered the express messenger, and walked off with over \$60,000. Four masked men, holding four revolvers, walked into Station agent and operator J. W. Barnhart's office a few minutes before train time, and one of them directed him to cut off all telegraph communication by tearing up his instruments. Barnhart endeavored to throw them off the track by taking up only his sounder, but the men bade him pull up the relay and hand it over, which he did. The man who gave the commands was a captain, evidently an ex-telegraph operator. Barnhart, under cover of the revolvers, and according to the Captain's commands, next hung out his red light to stop the express, which soon came up and stopped. Barnhart was rushed to the door of the express car by the four robbers, who made him knock for Express Messenger Miller, who opened the door a few inches. The highwaymen then, by some means, shoved the door clear open, jumped in and covered Messenger Miller with cocked revolvers. They took Miller's revolvers away from him, bruised him about the head considerably, and then opened one safe, from which they obtained the treasure boxes containing \$60,000 in gold coin, which was a shipment from California, and \$458 in currency. They tried to make Miller open the through safe, which has a combination lock and is not opened anywhere between the termini of the road; but as the messengers do not know the combination he could not comply with the demand, and they let him off after explaining. While this was going on in the express car, the other part of the gang had captured the engineer and firemen, and put out the fire in the engine, and the moment Conductor Patterson stepped on the platform to see what orders were waiting for him, as indicated by the red-light signal to stop, he too was corralled, being covered by cocked revolvers and ordered to throw up his hands. Patterson says there were from ten to fifteen of them. After plundering the express car the robbers went into the passenger coaches and began robbing the passengers, securing about half a dozen gold watches, and nearly \$500 in cash, and some railroad tickets. A freight train now approaching from the rear, Conductor Patterson was conducted by a guard past the sleeping coaches a short distance up the track, so that he could flag the approaching train to prevent a collision. The guard then left him and joined the main body, who then retreated from the cars. They had no horses in sight, but had them concealed some little distance off. They soon disappeared as mysteriously as they had appeared, going north, as was shortly afterward learned. Mr. Barnhart managed to notify the train dispatcher at Cheyenne by tapping the ends of the wire together, and preparations for pursuit were immediately begun. Superintendent Davis telegraphed the sheriff at Denver and Deadwood, offering \$5,000 reward for the capture of the thieves, and \$5,000 for the recovery of the money. On September 27th a Kansas sheriff and some soldiers with horses, learning that the robbers were moving south, evidently making their way to Texas or Mexico, started in pursuit. Near Buffalo Station they came up with Collins and another. Collins attempted to shoot, but the Sheriff was the quickest and shot him, killing him at the first fire. One of the soldiers shot the other, whose name is unknown. The sheriff then took from their dead bodies about \$20,000 in gold of the stolen funds. Four more of the robbers are supposed to be in the same vicinity.

The Telephone Exhibition at Troy.

The following spicy report of the recent telephone "show" at Troy, is from the pen of an old timer, formerly manager of the N. Y., Albany and Buffalo office at that point:

Old telegraphers for a quarter of a century past have thought nothing of laughing, talking, playing chess and checkers, quarreling, etc., over a telegraph wire hundreds of miles long. Even the outside world knows of many marriage ceremonies having taken place over the domestic wire. For more than a dozen years "reading by sound" has been the rule among operators—the old register with its paper slip being never seen outside of some backwoods office, or on some private line. The telephone, however, is a latter day invention, and Prof. Bell's telephone is a big thing for a little one, and immensely valuable as well. The Bell instruments have been successfully worked, without battery, over a resistance twenty-five times the length of the Atlantic cable! By these instruments every word is distinctly transmitted, as well as every note of instrumental music. We expected wonderful things of the Edison telephone exhibited in this city last week. Had read half columns of stuff to the effect that the music came through the machine "as accurately as though played or sung upon the stage," and that "everybody was both astonished and delighted at the extraordinary phenomenon, etc." Attended, as a matter of course. Found some four hundred assembled in Music Hall. Saw a cheap table on the stage, on which stood an ordinary telegraph key and sounder, and a trunk-lid looking concern standing on edge, which the electrician said was an old dulcimer. Believed him, and do now. Show began by electrician chatting with the River Street office—hair of the audience on end. As the printed programme was upset early in the evening by the muddling of wires, we append about what took place—which is near enough to the truth for all practical purposes: Learned essay by the electrician, in which he labored to prove that the Edison telephone had no value whatever, save as a scientific toy. (Mem. Had he postponed this speech a couple of hours he might have omitted it altogether, as what was left of the audience had long before ascertained the truth of his assertion through the experiments.) Solo on a coarse comb, by the janitor of the Western Union Telegraph building, New York; vocal solo—"Hot corn, corn! Hot corn!" by Mrs. Dinah Jefferson, of the Sidewalk Conservatory of Music, corner of Bleeker and Thompson streets, N. Y. Some remarks by the electrician, with a non-successful attempt on his part to bore a hole through the palm of his left hand with the forefinger of his right; solo, on a dry fiddle with a wet bow; solo on a wet fiddle with a dry bow. Remarks—life of Edison, by the electrician. The audience was held breathless with interest on being informed that Edison worked only in the night, and that he had invented other telegraphic contrivances equally valuable with this telephone! Chorus—thirteen pair of squeaky shoes carrying their wearers out of the hall; solo on a pumpkin vine, by the Hermit of N. Y.; vocal solo—"Thou art so near and yet so far," by Prof. Schmidt, of the Atlantic Garden, Bowery. (Mem. The Professor had unfortunately left his store teeth in a tumbler at home, hence many of his notes stuck together, but the audience didn't drop on it.) Remarks by the electrician to the effect that somebody was fooling with the wires! Whispering duet—Manager Ashby, of the W. U. office, and the electrician, with squeaking accompaniment of outward bound shoes, assorted sizes; more nothing and more departures of half dollar scientists. Aha! Connection restored! Electrician dons a 5½ inch smile, and shows his sleeve-buttons to advantage. Resumption of music! Jewsharp solo, "Death of the antique bovine quadruped," Bridget Maginnis, of fruit stand corner of Liberty Street and Broadway—tremendous applause; accordion medley—"Tommy make room for your Aunt," "Hold the Fort," "Pull down the Blinds," "Scotch Itch," St. Patrick's Day Parade—"boy in the gallery cries 'Bully,'" and the electrician bows; a few remarks by the electrician. Finale—B sharp bappipe to A flat audience, "Star Spangled Doodle," ending with a walk around by the congregation and shutting off of the gas. Profits of show, \$3.50.

In New Zealand, during the first three months of this year, 292,308 telegrams were transmitted, being 21,996 more than were transmitted during the corresponding period last year. In cash revenue, these numbers are represented by £16,337, and £670, respectively.

Electric Candles.

Among other battles at which one assists this moment in France is that between electric candles and gaslight. Yesterday evening I visited this peculiar candle manufactory, in the Avenue des Villiers, the director of which is a Russian engineer and also the inventor, M. Joblockoff. Now, as Voltaire observed, light comes from the north. The laboratory is hung with pictures and colored stuffs, which can be as easily distinguished in their shades as if in full noonday. The candles have the same ratio to gas and oil lamps as sun to moonlight. The inventor poured some glasses of water on the flame of his dipo, but they burned away all the same. They emit no smoke, and consequently cannot blacken objects, nor any heat—350 times less than an ordinary candle—hence books will not fall out of their bindings, nor tapestry turn into black snuff. There can be no fire, no explosions, and the light can be laid on some three to fifteen times cheaper than gas or oil light. The light does not tremble or twinkle much, and none at all if it passes through a globe slightly opaque. The candle is composed of two cylindrical sticks of charcoal, separated by a preparation of sand, ground glass, and kaolin; a magneto-electro machine furnishes the current, which flows from one point to the other of the charcoal rods. Each candle burns three hours, and the extinction of one lights up another. We are more than on the eve of a great discovery; but as the proof of the pudding is in the eating, the invention will soon be tested, as the circus, the opera, the Louvre drapery shop, and the railway termini are to be illuminated by the new process. It will never be accepted by ladies for a ball room, as, unlike charity, it will not cover a multitude of sins.—*San Francisco Call.*

The Train Dispatcher.

The position of Train Dispatcher is second in importance to no position on the road. He is frequently found to be also an expert operator, but it is not absolutely necessary that he should be a telegrapher. It is his duty to keep the localities of every train running on the division constantly in his mind, and issue orders to them at every station where they stop. Where the roads have only single tracks, the labors and responsibility of a train dispatcher are very great, sometimes as many as 20 trains, travelling in opposite directions, being on the division at one time. All these have to meet and pass each other somewhere along the division. The dispatcher must know just where to hold the train, where to send that one from and how far to run it, and know within a second just when to expect a train at a station. With his time-card before him, containing the names of all stations and numbers of all trains, the dispatcher sits close to the operator, surrounded by clicking machines, checks off train and station as arrivals are rapidly telegraphed, and quickly issues his orders to the operator, to be sent to expectant trainmen all along the division. The dispatcher of trains on a single track is the player of a gigantic game of chess, the men in which are to be so moved that they may never be brought in check. For any accident by collision on a road, the dispatcher is held responsible, unless it is shown that his orders were disobeyed.

Another of Those Plug Factories.

Groton, Conn., is a beautiful village of about five or six thousand inhabitants—lying on the east bank of the river Thames, and gradually rising from the river, its hills studded with residences beautiful in their simplicity, it presents a cheerful scene to the passing traveler.

It is famous for two things. First, as being the spot where Benedict Arnold, the traitor, ordered the bloody massacre of a garrison of defenceless soldiers in 1781, and, secondly, as being the seat of an unpretentious but thriving "plug factory" in 1877. Miss Mary A. Harlow, the manager of the Western Union office there, has within the past few years nurtured and cast forth upon a cold and pitiless telegraphic world not less than one dozen of that placid class whose ability is a power to make A. B. C. upon register paper, and then leave the key open twenty-nine minutes and ten seconds to gaze upon the mystic symbols, laughing immoderately at their success, while a line full of skilled and exasperated veterans read their hair and use strong language. Owing to the stringency of the times, and a growing sentiment against it, the office at present has but two pupils. Nevertheless, the manageress has abundantly demonstrated her right to one of the "free advertisements."

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

W. J. JOHNSTON, - - - Publisher.

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CORRESPONDENTS will please mail all communications hereafter, except those for the Scientific Department, to W. J. JOHNSTON, P. O. Box 3,332, New York, as usual.

THE American Institute Fair opened in this city September 12th. Besides other electrical matters on exhibition, Prof. Bell's telephone can be seen and examined.

Miss L. A. CHURCHILL, author of "Playing with Fire," "Eyes of Blue," &c., contributes a very pretty little sketch to this issue. It is called "Three Friends," and will well repay perusal.

AMONG other places, THE OPERATOR is regularly on sale in this city at the corner of Broadway and Liberty Street, at the corner of Broadway and Fulton, in front of the Western Union Building.

WESTERN UNION and Atlantic and Pacific stocks both sold higher immediately after the "pooling" agreement had been announced, but have since fallen: Western Union are now 78½ asked, and Atlantic and Pacific 20½.

MR. REFUS HATCH, the shareholder who brought suit some time ago to restrain the A. and P. from issuing more stock, failed in this city last week. He sold a number of shares of Western Union, but was unable to deliver them, on account of the increase in the price of the stocks. This causes his suspension, according to the rules of the Stock Exchange, until he shall have paid the difference—\$2,500—which amount he does not, so far, seem to have been able to raise.

PLATO said: "There is nothing so delightful as the hearing or speaking of truth." We are inclined to think that Plato was a telegrapher in early life, and that the above remark was wrung from him after waiting three-quarters of an hour for the wire to close, and then receiving the assurance in turn of each office on the line, that "it wasn't open here." It's very evident, also, to our mind, that Dickens was a telegrapher. Although nothing has hitherto been said about it, we do not for a moment doubt but that it was after coming on duty one morning and finding every wire in the office either grounded, open, or crossed, and the little sounders spluttering away as if they had a first-class attack of *delirium tremens*, that he went home and wrote that great work of his, "All of a Twirl." It is thought, too, that Mr. Tony Weller, who figured in the Pickwick Papers, was a relative of the recently appointed Supt. of the Law Telegraph wires at 197 Broadway.

The Telegraphic Situation.

The "pooling" arrangement recently entered into between the Western Union and Atlantic and Pacific Telegraph Companies may be considered a virtual consolidation. All rivalry between the two is now at an end. Thus does the Western Union add another "opposition" company to its long list of previous conquests, and again practically control the entire telegraphic business of the country. There seems, however, to be some hitch in arranging the details, and persons interested in the matter are beginning to feel uneasy, and ask whether the whole thing is not another stock jobbing arrangement. Jay Gould is so slippery an individual, that people naturally dread to have anything to do with a matter in which he is known to be interested. We do not think that the negotiations are at all likely to fall through, but at a meeting of representatives of both companies held in this city last week, the A. and P. wanted a written guarantee from the Western Union that it would not increase its—the A. and P.'s—expenses. The Western Union refused, and the meeting broke up without anything being done in the premises.

The annual meeting of the Western Union Co. is to be held in this city on Wednesday, October 10th, and we shall probably be able to publish President Orton's report for the year ending June 30th in the next issue of THE OPERATOR. It is expected that there will be a fight over the new directors, who are elected at that meeting, as it is asserted that a combination is forming to oust the present direction. It is also said that there is a clique of stockholders who desire to elect Gen. Eckert as president of the Western Union in place of Mr. Orton. If this be so, and General Eckert becomes president, it will be an open question whether the Western Union absorbed the A. and P., or the A. and P. the Western Union!

There is certainly one thing about it, considerable money has been made in stocks in consequence of the "pooling" agreement. It is stated that a prominent director cleared a cool \$500,000. That is one of the advantages of being a director in such a corporation. One always knows what is going to happen long before the outside world hears anything about it, and is therefore in a position to buy or sell stock to great advantage.

By the way, the Western Union Company, last March, through our respected contemporary, the *Journal of the Telegraph*, told operators that its interest and theirs was identical, and that if it only had the entire telegraphic business of the country in its own hands it could pay them much better salaries than it then did. Now the company may be said to have the field completely to itself. The business prospects of the country, moreover, are brighter than they have been for years, and a general revival of business and renewal of prosperity may not unreasonably be looked for. THE OPERATOR therefore presents its compliments to Mr. Orton, and begs respectfully to suggest that some step be taken at the coming annual meeting, October 10, toward increasing the salaries of telegraph employés. It does not deem it necessary to say a single word as to the desirability of such action on the part of the Western Union Company; Mr. Orton is quite aware of the feeling of telegraphers everywhere on the subject, and certainly the Western Union cannot prove the sincerity of the article to which we refer in a more appropriate manner than

in the graceful way we suggest. As the expense of doing the business will now be very much less than it has hitherto been, in the face of bitter rivalry on the part of the A. and P., while the rates will be considerably increased, the net profits of the Western Union cannot fail to be very much larger than formerly. Let us see now whether "the amount of the receipts which can be invested in compensation to those practically engaged in its transaction" will "be apportioned accordingly."

An Unsuccessful Telephone Concert.

An Edison telephone concert was announced for last Tuesday evening at Gilmore's Garden in this city. Mr. Arbuckle's performance of "The Last Rose of Summer," Mr. Carlton's "The Heart Bowed Down," and Miss Salie Reber's "Bonnie Sweet Charlie," were to have been heard through the telephone, though played and sung in the Exhibition Building in Philadelphia, and Mr. Stoddard was to sing "Killarney," Mr. Bent to play a cornet solo, and Miss Lillie Barry sing "Mary of Argyle" in the Garden for the delectation of the audience at Philadelphia. But so far as the telephone was concerned, the concert was a miserable failure. Everything went along beautifully until the ninth number on the programme—"Exhibition of Edison's Musical Telephone"—was reached, when things came to a complete standstill. After much telegraphing by the operator, mounted on a pedestal in front of the orchestra, and the circulation of a report that there were 10,000 people waiting in the Exhibition Building to hear the singing and playing of Mr. Stoddard, Miss Barry, and Mr. Bent, the operator stepped forward and said that although the wires had been in perfect order up to five o'clock in the afternoon, when a tune was heard clearly in all parts of the Garden, it had become impossible to send or receive a sound between the Exhibition Building and the Garden, owing to the interruption or breakage of the wire specially laid between the telegraph office in Philadelphia and the Exhibition. In order, however, that the audience might not be quite disappointed, Mr. Bent and Mr. Stoddard had been sent down town to the Western Union office, and thence would transmit the music. Mr. Gilmore then went on with his programme, and the audience waited patiently for about an hour, when the operator, finding all was ready, announced "The Last Rose of Summer." Not a sound came. Then there was a good deal more telegraphing and adjusting of the instrument. The audience beginning to show signs of impatience, Mr. Gilmore perpetrated a musical joke by ordering the band to strike up "Oh, dear, what can the matter be?" which they did spiritedly. After another long wait the band played, "Away down upon the Suwanee River," and after yet another and another, "Not for Jo" and "We won't go home till morning." Matters were growing serious, when there came through the instrument some sound, and the audience recognized the first bar or two of the "Low-Backed Car." And then all was still. The operator again apologized, stating that it was impossible to get the instruments correctly adjusted at that late hour—it was then a quarter past eleven—and that therefore the effort had to be abandoned. Mr. Gilmore played the audience out to the tune of Bartlett's galop, "Victoire," but intended no irony.

The Western Union Time Ball.

The first experiment of dropping a time-ball from the flag-pole of the Western Union building was successfully made September 17th. The time-ball is three and a half feet in diameter, made of copper and falls about thirty feet. At 11:55 sounders were connected with the Admiralty clock in Washington, and for three minutes the seconds' beats of the clock were repeated on a register that enables the electricians to get any variations in the clocks.

Precisely at twelve the falling of the ball recorded itself automatically, and enabled all the ship-masters, pilots, and others in the harbor or rivers, as well as residents of the city, to regulate their time-pieces. The first experiment certainly was a success, and it is likely that hereafter at noon the ball will drop promptly. At 11:55 it will be hoisted half way up the flagstaff on the tower, and can be seen by all the shipping lying at the New York and Brooklyn docks and on the New Jersey shore, as well as by all vessels lying in the bay, even beyond Quarantine. For long distances an ordinary ship's glass will be needed. It can also be seen on Broadway from Tenth Street nearly to the Battery, and from suitable positions it can be seen by a large majority of the citizens of New York, Brooklyn, Hoboken, Jersey City, etc. The ball will remain at halfmast from 11:55 to 11:58. At 11:58 it will be hoisted to its highest point, about half-way up the main-staff—that is, over 250 feet above the street. It will be dropped by an electric signal at exactly noon by New York time.

If on account of high winds, etc., the ball fails to fall at twelve, it will be kept at the mast-head till 12:5, and then dropped. In such cases, a small red flag will be hoisted at 12:1, and kept flying till 12:10. It is believed that this will be an important public convenience, as clocks in all the large hotels, factories, banks, etc., can, by an ingenious electrical arrangement, be connected with the Western Union wires, and controlled and regulated direct from the Naval Observatory.

Why the Indicators Won't Work.

A joke entirely too good to lose is related at 197 at the expense of two very well known Western Union officials. It seems that Anson Stager, during his recent visit to this city, while waiting for the elevator, noticed the ticking of one of the little round indicators recently put up to show the floor on which the elevator happens to be. He mistook it for a clock, and drawing his gold watch from his pocket, found that, according to the time indicated above, he was a few minutes slow. After fumbling all over his pockets for a watch-key, he found that the "clock" had in the meantime moved forward several hours, and after gazing at the thing for a few moments in mute astonishment, finally saw what it was, and stepped into the elevator with a very broad smile on his countenance. He considered it so good a joke that he related it himself in the executive office. "Oh! that's nothing," remarked young Dr. Green, "Mr. Prescott made precisely the same mistake the day after the indicators were put up."

One of the indicators seems to have taken it into its head to run backward, and nothing that Mechanical Engineer Bob Morris can do appears to have any effect in showing it the error of its way. One of the men asked him last week why

he didn't fix it. "I've been trying," he replied, sadly, "but when a vice-president and the electrician of the company both attempt to set their watches by a poor little indicator, is it any wonder that it becomes demoralized?" The other man walked off ruminating.

Back Again.

In resuming editorial control of THE OPERATOR, after an absence of seven issues, it is pleasant to find that everything has worked so smoothly during the summer. Our own opinion is, that the paper has been extremely interesting; and that Mr. Christie and his assistants deserve the hearty thanks of both publisher and readers for the very faithful and conscientious manner in which the work has been performed. We might say here that we had a very pleasant time abroad, feel much benefited by the vacation, and hope to be able to work even harder during the coming winter, to make an interesting paper, than we have hitherto done. For the many congratulations—both personal and by letter—received since our return, we feel very grateful. We thought that the present would be a very appropriate time to make little changes in the paper, but there does not appear to be much that we can change to advantage.

It may be, however, that the readers of THE OPERATOR are becoming tired of the "Themes for the Thoughtful," and that something of a different style might now be preferable. Therefore, on the principle that a little nonsense now and then, is relished by—even telegraph men, the column of "Themes for the Thoughtful," gives place for the present to a column of "Sparks." These "sparks" it may be well to remark, are intended to be very witty. We mention the fact, lest some might imagine that they were still reading the "Themes for the Thoughtful."

A Fire in the Patent Office.

A very destructive fire occurred in the Patent Office building in Washington on Monday last, in which more than 85,000 models were burned. The Patent Office was entirely destroyed by fire in 1836, together with the 10,301 models which had accumulated in thirty-six years. Since then 183,000 patents have been issued, 160,000 of them represented by models. Of these more than one-half were destroyed by the fire on Monday. Among the curiosities of invention in the hall which was partially destroyed is the original Morse telegraph of 1837, side by side with the printing and quadruplex telegraphs of later date. In the east hall, which was not destroyed, the original models of the telegraph were deposited, and therefore saved. The original engrossed copy of the Declaration of Independence, Franklin's printing press, the uniform of General Washington, and other valuable relics, were in the south hall, which was not damaged. The flames were happily stayed in time to save the room in which the original drawings of patents are kept. So serious was the fire that the Baltimore and Alexandria engines were telegraphed for, and were on hand in less than three-quarters of an hour. The damage to the building is variously estimated at from \$500,000 to \$1,000,000, while that growing out of the destruction of models is almost incalculable. The fire was accidental.

Sparks.

2 An express train is faster than a day laborer, but it can't stop as sudden.

Fish are never found napping, though rocked "in the cradle of the deep."

A mosquito cannot fly as high as an eagle, but he can bully all the Christian graces out of a man a great deal quicker.

Somebody says: "Every failure is a step to success." This will explain why the oftener some men fail the richer they become.

At the cattle show: Gentleman, with solemnity—"Miss Florence, do you love beasts?" Lady with vivacity—"Am I to consider that as a proposal?"

"Another old citizen gone," says a Chicago paper. "Yes," remarks the *Detroit Free Press*, "he got into Canada at this point. What bank did he carry off?"

A few weeks more, and the ice-cooler may again be used as a receptacle for old hats and boots that have earned the right to honorable discharge from service.

In a Russian school the spelling class wears out a new alphabet every week. Some of the most knotty words are smoothed off with a jack-plane before given to the class.

"He is a man after my own heart, pa," said Julia, referring to her Augustus. "Nonsense," replied old Practical, "he is a man after the money uncle left you,"—and then all was quiet.

The man who comes to the depot two minutes behind time, and sees the railroad train scudding out of the other end, derives no satisfaction or comfort from the proverb, "Better late than never."

"Do you consider your life worth more than other people's?" indignantly asked a gentleman of a negro who was the first to leap into a boat from a snagged steamboat on the Mississippi. "It's wuth a heap more to me, marster," was the unanswerable reply.

A Mobile paper speaking of the death of "Admiral Semmes, says: "As the slow rising tide of the moon-lit waters of Mobile Bay was yesternorn moanfully beating her sandy shores, a life was fast obbing out whose glorious career had been spent on that liquid plain which encircles the globe." And yet we wonder at crime!

A musical instrument, called a "Dactylomono-cordo," of one string, and played with one finger, has been invented in Naples. But if it had a name four times as long, and was played with seventeen fingers, it could create no more ill feeling and misery and crime than an accordion in the hands of a twelve-year-old boy.

A FISH STORY.—"Far be it from us to doubt the word of a brother editor," says the *La Crosse Sun*; "we believe them all to be truthful men; but when the Durand *Times* says that the water is so low at the mouth of the Chippewa River that catfish have to employ mud-turtles to tow them over the bar, we feel as though the editor must be away, and some local minister filling his place."

When a railway was opened in Virginia on a certain occasion, a bishop was called upon to make the prayer. Nothing in any prayer-book, or in usual private devotions, would exactly "applicate" the occasion. So he wrote out a prayer, and read it from the manuscript. This performance greatly astonished some of the negroes who hovered on the outskirts of the crowd. "Pomp," said one of the ebionies, "what does you tink of dat?" "I tinks," replied Pomp, "dat dis is de fust time dat de Lord was eber written to on de subject ob railroads."

His colored domestic was scrubbing away at a map of the United States, when he asked her: "Look here, Dinah, what makes you scour all the while on that one spot there?" "Golly, Massa Smith," explained Dinah, "dar's a fly-spec dar dat won't come out nohow this chile can fix him." "Bless your heart, Dinah, that is the little State of Rhode Island that you are trying to wipe out with your mop," "Golly, massn," exclaimed Dinah; "and dat am de State of Rhode Island, and dis chile was borned dere, and now you couldn't get one ob dese feet in de whole State."

There's a New York lightning lady, whose pretty raven curls
Hang very sweetly down over her marble forehead;
She says that telegraph men are a set of great hyenas,
And send messages over the wire that are positively horrid.

Washington Notes.

As the time for the meeting of Congress approaches, Washington is fast filling up with the usual winter population of Congressmen, lobbyists, politicians, and office-seekers; and the streets, which have looked so deserted during the past summer, are again assuming an appearance of life. In all directions houses are being painted, repaired, cleaned or altered; and the legend "Furnished Rooms" has again become epidemic. The extra session, which begins October 15, will, after the election of a Speaker, be devoted to passing appropriations for the army and navy, for which purpose it was called, and the President will not send his annual message until the regular session, which commences in December. Communications will be sent from the Secretaries of State, War, and Navy Departments for the information of Congress, which will probably be mailed in advance to the various press agencies, and not telegraphed. A brisk business is expected, however, from the very beginning, and as the extra and regular sessions combined will last seven or eight months, there will be plenty of "extra" for all. As several of last winter's force who have been away all summer are expected to return in time for the opening of Congress, it is doubtful, as yet, whether any new men will be needed. The A. and P. office in the corridor of the Capitol will be reopened this session; the same company's offices in the Senate and House will remain closed. The W. U. offices at the Riggs House and Ebbitt House have been closed. The pole in front of the W. U. office on Pennsylvania Ave. caught fire last week from almost the same cause as the New York switchboard. The fire was soon put out by our new "Babcock Extinguisher," the stream from which just reached the pole from our third-story window. H. S. Larcombe has gone to Santa Fe, N. M., to work for the Signal Service. We hope he will return without injury, that we may hear some of his wonderful adventures. Ed Morton's suit of clothes was rescued with great difficulty from the big fire in the Patent Office; their loss would have been irreparable. J. B. Austin has returned from Canada in good form and condition, after resting the entire summer. L. B. McCarty of the Associated Press is away on vacation. The champion forgetful man is "Postal Telegraph" Hubbard, who, after renting a house, and leaving his address with the clerk in the W. U. office, started on a journey. On his return he had to call at the telegraph office to find out where he lived!

Dashes Here and There.

There is talk of winding up the Direct Cable Co., in order to reconstruct it on another basis.

An agent was recently struck by lightning while erecting a rod on a house in Rhode Island.

Scientists differ in regard to the size of a bolt of lightning, but every one of them takes good care to dodge them.

The rumor that the Earl of Beaconsfield has advised Queen Victoria to take a telephone to Balmoral is looked upon as a sly joke.

The idea of catching an interviewer under your back window, with a new fangled little pocket telephone at work, is one of the apprehensions that make life dreary.

Experiments in a mine in Cornwall, England, with the telephone, point to the probability of its being employed in conveying signals from deep mines to the surface.

The confused and demoralized condition in which the Russo-Turkish war names reach us on this side of the Atlantic, leads to the conclusion that the Cable never took the first prize at a spelling bee.

The other day a female aeronaut at Cincinnati made an ascension in a hot air balloon. The balloon collapsed, and in its descent struck against a telegraph wire. The lady's fall was broken, and her neck was not.

"Great uprising of the Poles," was the startling news sent from Russia the other day. A telegraph company had been recently started, and the poles for the wires were just being erected—that is, all.—*Philadelphia Bulletin*.

It seems that the English Postal Telegraphs have not yet reached a paying basis. A bill for enabling the further sum of £500,000 to be raised for the purposes of the Telegraph Acts, 1868 to 1870, has been brought in and ordered to be printed by the House of Commons.

A cable is to be laid direct between Grisselham, in Sweden, and Aland, in Russia.

Thirteen synchronous electric clocks are being erected by the corporation of Glasgow on conspicuous points of the city. For some time the disparity of time between the existing town clocks has been matter of complaint.

To avoid the disturbances occasioned by thunderstorms, the Prussian Government has ordered a subterranean telegraph line to be laid between Berlin and Hamburg. Similar lines are also to be laid between other large towns in Germany.

"Have you read about the 'telephone'?" was asked of a man in town a few days ago. "I s'pose I have," replied the other; "but I really forget now whether he is a Russian or a Turkish General. It is so hard to get the hang of these foreign Generals."

War correspondents say that the greatest difficulty is experienced in dispatching telegrams from the seat of war, as neither side will allow any messages to go out without the closest supervision. Many telegrams are forwarded for the purpose of deceiving the enemy.

It's a poor rule that doesn't work both ways. When the telegraph companies pool their earnings, they gather them in, but when the nice young man goes to the billiard-room and pools his earnings, the other man generally gets the most of them.—*Burlington Harbinger*.

Professor Bell, the inventor of the telephone, was recently married. He married a deaf and dumb woman. Probably he thought there might be a great deal going on in a house full of telephones that it wouldn't be really, vitally necessary that his wife should hear.—*Detroit Free Press*.

A correspondent speaking of telegraphers, says: "As a proof of the education of telegraph operators, it is only necessary to read the articles which appear from time to time in our paper, THE OPERATOR, and which come direct from their pens. Can any other line of business show such talent?"

The Springfield *Republican*, speaking of the recent Centennial Celebration at Lee, says: "Senator Garfield presided at Thursday's dinner with such ability and showed his kind nature in so many ways that it is too bad that an unaccountable freak of the telegraph made us give the credit to 'Mrs. Field.'"

The electric light apparatus for the detection of torpedo-boats, fitted up on H. M. S. Alexandra, at an expense of \$5,000, has proved so satisfactory that the Admiralty has ordered similar apparatus for the new turret ship Dreadnought, now fitting for sea at Portsmouth. It is likely that other vessels will be fitted in like manner.

Owing to the depression in trade, the increase in the amount of postal telegraphic business in England during the fifteen months ended March 31, 1876, fell considerably short of the increase of previous years. The number of messages dealt with was 26,440,439, being an increase of 960,000 over the number in the preceding fifteen months.

A Chicago man, residing in the suburbs, having occasion recently to telegraph home from a distant Wisconsin town, asked the diminutive and apparently unsophisticated operator what the tariff would be, and upon being told that one insatiable dollar would suffice, burst out, "Dollar be blowed! We can telegraph to h—l in Chicago for a quarter!" "Oh, yes," calmly answered the cunning knight of coppers and brass, "but that ain't outside the city limits!"

Professor Looms, of Washington, who has closely studied electrical phenomena, claims to have communicated with an assistant twelve miles away, by means of an aerial current. The current was reached by flying kites a certain height at each point, the string used being a copper wire. When both kites had attained high altitudes, messages were sent and received at the distance mentioned by an instrument at the ground end of the wire, the only electromotor being the atmospheric currents between the kites.

The fabled arms of Briareus were nothing to the arms which the telegraph gives to governments in our day. Only eight days ago an American vessel was illegally detained at Callao by the Peruvian authorities, and Callao is eight thousand miles away. Secretary Evarts had to read his despatches by the roundabout way of London, Lisbon, and Rio de Janeiro to Lima, but yesterday the vessel was released. Thus it is that the most distant parts of the world are brought together, and space and time are annihilated by this marvellous invention.

Telegraphing in France is a government monopoly, and all dispatches have to be visé by the government. Telegrams do not go directly, but are sent by a pneumatic tube to the main office in the Rue Grenelle Saint-Germain. There an agent of the government takes them out, reads them, has an interpreter read them if in a foreign language, suppresses them if he does not like them, puts his stamp upon the harmless ones, and they are sent off. Under these regulations it would be rather rash for any republican to attempt to "insult Marshal MacMahon" by telegraph.

Quite a serious fire occurred at Keyport, N. J., on Saturday, September 22d, by which the entire business portion of the town was entirely destroyed. The damage was about \$200,000, and among other places burned was the Western Union Telegraph office. The operator, who, for a time was believed to have been burned in Dr. McKinney's house, escaped with his hair a little singed. When the fire had exhausted itself he immediately made a connection, put an instrument on the top of a barrel on the sidewalk and commenced work. On Monday the instrument was put on a board in the front window of McKinney's store.

Dialogue between a Warren county farmer and a lightning-rod man: The farmer inquired if his rod would draw the current from a neighbor's house, a few rods distant. "Certainly," replied the confident rod man. "Will it draw from my barn?" pointing to a barn a little further off. "Of course; a great deal further than that." "Well, will it draw as far as that hill?" pointing to a sandy knoll, some half a mile distant. The peddler thought it would—was sure of it. "Well, then, you may put up ten feet of it on that hill; I don't think I'd like it to come any nearer than that." Peddler evacuated, and he now votes that farmer an unbeliever in the science of electricity as demonstrated by lightning rods.

It is the custom to give a present to the person who first tells an Egyptian Viceroy that his reign has begun. When the death of Said Pasha, the predecessor of the present Khedive, was hourly expected, the head of the telegraph department watched to be the first to report the news when the wires brought it to him. But he got sleepy, and directed an operator to wake him when the news came. The operator was too sharp, however, and directly he got the message delivered it in person to Isman Pasha, and then went back and woke his master, who innocently hurried to the palace, only to find he had been forestalled. The perfidious operator now has the rank of pasha, while the sleepy manager whom he betrayed is nothing more than a bey.

When a Sacramento saloon was connected with the American District Telegraph Company, a Chinaman employee manifested much curiosity to know the purpose for which the instrument was designed. The proprietor told him it was put there to watch him, and see that he took no drink without putting the equivalent in the drawer. John was quite temperate for several days, but one morning his weakness overcame him. The proprietor arising early that morning, was astonished and amused to see the Chinaman sneak cautiously up to the box, throw a towel over the face of the dial, and then proceed to take a drink of the best brandy in the house, after doing which the Chinaman took off the covering and went on about his business, remarking, "Me heep too sabbee him."

It is probable that civilization will eventually reach such a stage in this country that the idea of suspending telegraph wires on lofty and unsightly poles, not only through the wilderness and prairie, but in the handsome streets of great cities, will be considered as primitive and absurd as is now the idea of an ox-cart for rapid transit. To say nothing of the disfigurement caused by the present custom, there is to be considered the constant danger to the wires from wind, lightning, malice and accident, and the loss attending frequent interruptions of communication. They have adopted the better way in Germany of laying telegraph wires under ground, arguing that, although it costs much more at first than the pole system, it will be economy in the long run in doing away with constant repairs and interruption, and—what is of great importance in any country in time of war—making it difficult for an enemy to cut the wires, not knowing where to find them. A subterranean line has already been opened between Berlin and Mayence, and it is intended to connect Frankfurt and Strasburg in the same way. There has been some movement toward this method on this side the water. It will become practical eventually.—*Chicago Railway Age*.

The recent experiments with the Jablochhoff Electric Candle at the West India docks, Limehouse, London, were completely successful. One candle was placed in a common street lamp on the wharf, and one fixed in a hand lamp, with a sufficient length of insulated wire to enable it to be carried about the various parts of the ship. On deck, in the hold, and from end to end of the vessel, this lamp was borne without the light flickering for a second. Wherever it was placed, every object for yards round about was clearly defined. At the same time the light on the wharf was so powerful and widely diffused that the labor of unloading the ship might have been carried on without difficulty.

TELEPHONES ARE NOT TO BE UNMIXED BLESSINGS AFTER ALL.—All the benefits accruing from the invention are in danger of being lost, on account of the sympathy found to exist between different telephones. Thus we are told that a Bell telephone in Albany reproduced the music passing between Edison telephones in Saratoga and New York, although there was no actual connection between the wires. "Sympathy" was excited by a third wire passing near the other two. If the owners of telephones are to be compelled to listen to all the gossip and music of the neighborhood, and run the risk of mistaking their neighbors' messages for their own, telephones may prove to be nuisances, and the sympathy existing between the telephones themselves will not be reflected in their respective owners.

"Turk," a night telegraph operator in California, wanted to know when the four o'clock express went through, and he found out. He tied a string to the stand-pipe, carried it over the rails into the office, and tying it to his wrist, fell to dreaming the happy hours away. Along thundered the express, the great wheels did not cut the cord, and it then became a question of strength between the locomotive, the cord, and "Turk." The express couldn't stop, the cord wouldn't break, so "Turk" became a partner to a lively waltz. First he thought he would run after the express, but the sides of the building stopped him. Then he turned a somersault over the sofa and stood on his head in a spittoon, then he tried to catch a fly on the ceiling, but at last the infernal cord broke and the express went on. If you want to know where lightning struck, look at his wrist.

AN ELECTRIC LIGHT SIGNAL.—Capt. S. B. Luce, commanding the flagship Hartford, has been conducting a series of experiments with a patent magneto-electric machine and automatic lamp, which it was proposed to introduce in the Navy for distant signaling at night. Signals by means of flashes, using a reflector having a screen over its face, with a sliding hood covering an aperture two inches in diameter, through which the flashes were made, were read at a distance of eight miles on a bright moonlight night, and could have been seen at twice that distance. Other experiments made without a reflector, using a circular screen to interrupt the light, were equally successful. There was no opportunity for trial on a stormy night, or in foggy weather.

In a trial with the Coston signal, the electric light was readily discerned at a distance of 13 miles, while the signals by the Coston's lights could not be distinguished, only an occasional color being seen. At greater distances than 13 miles the electric light becomes less distinct; and at 15 miles it was dropped, being picked up again at 12½ miles. Five rockets were used at these distances, only one of them being seen.

WHEN the corporation known as the Direct Cable Company, owning one of the transatlantic telegraph lines, secured a charter from Congress, it was expressly stipulated in the act of incorporation that they should remain independent and not amalgamate in any way with other cable companies so as to destroy competition. It having been made known to the President that this stipulation was being violated, the State Department was directed to investigate the matter. At the Cabinet meeting, July 23d, Mr. Evarts reported that this company had made an arrangement with the Anglo-American Company in regard to the transmission of messages, which was a violation of the spirit of the act of Congress, and he was directed by the President to notify the company that this arrangement, which practically effects a monopoly, must be discontinued, or this Government will not permit the company to use its coast as the terminus of its line. This company is controlled by English capitalists, and has been doing business in connection with the Atlantic and Pacific Telegraph Line. The arrange-

ment recently made by them was a combination with the other cable line by which competition was in reality destroyed.

A patent was recently granted to one of the editors of the *Evening Bulletin* and the *Morning Call* newspapers of San Francisco, for a method of rapid telegraphing of stereotyped plates. It is claimed that by this process an entire page of a newspaper can be transmitted by telegraph in from fifteen to thirty minutes, delivering the copy direct from the instrument in such form that it can be handed immediately to the printer. In other words, the copy will be a substantial reproduction of the original, except that it may be given in a larger-sized letter if so desired. The stereotype requires no preparation for the purpose of telegraphic transmission, other than the filling of all its depressions, or spaces between the faces of the letters, with a non-conducting substance which may be quickly applied, the faces of the type being left clean by an equally simple process. The plate thus prepared is placed upon a cylinder arranged to revolve rapidly, so as to present each successive letter to fingers attached to a travelling frame. As the cylinder bearing the plate revolves the frame gradually advances by the operation of a screw; and thus each and every time is successively presented to the fingers of the magnetic points above mentioned. Necessarily the circuit is open when the points are passing over the non-conducting surface; but as often as the metal type presents itself to the said fingers the circuit is closed, and the corresponding magnetic points or pens at the receiving station make the record there in the same letter as the original delineated in a series of fine lines upon chemically prepared or ordinary paper fixed upon a corresponding cylinder at the receiving station.

Echoes from 197.

Fred Wilcox of the day force is temporarily working in the Brooklyn office.

Chauncey Raymond has resumed duty after about two months absence, caused by ill health.

Fred Cushing, who has been working in Saratoga during the rush, resumed his labors at 197, September 1st.

Mr. George Cumming, who has been away for several months, on account of ill health, has returned, looking well.

It is easier for a needle to go through a camel's eye than to tell on which floor the elevator is by looking at the indicator.

Theodore Williams who has been working at Kelly and Bliss' pool rooms, Hoboken, during the racing season, has returned.

Tom Allen says that the operator who wears a button hole bouquet has no more influence over a buggy wire than an ordinary mortal.

The Boston motor, which was working indifferently, has been overhauled and put in first-class shape by that veteran telegrapher Joseph L. Edwards.

Tom Davin, of Boston, finished a two month's vacation in the Provinces by a flying visit to New York. He regrets not having met Mr. Coombs!

Tom Davin of Boston is of the opinion that Messrs. W. H. Jackson and Joe Wood of our office are the best team that have ever manned the Boston quad.

The W. U. office at the Windsor Hotel has been closed, and the manager, Ed Miller, transferred to the main office. The Atlantic and Pacific office remains.

W. H. Jackson is back on the Boston quad again. Those who handled his copy during the late tour of President Hayes through New England, pronounce it first class in every respect.

"Fatty" Stewart, one of the best known men in the business, is in town. He and Tom Maguire "did" the Centennial at Bennington for the *New York Herald*. It required just fifteen days!

Mr. Orton says that the operator who complains of the lot which forces him to toil ten hours a day for forty dollars a month, should remember that it prevents his saving any money to lose in a savings bank.

The genial mail agent Holmes gave good advice last week to a 197-ite who asked his advice on the subject of matrimony. "Young man," he said, "beauty fades as the years go by. Don't fall in love with a woman simply because she has a pretty face. Remember that a wealthy father-in-law is better than the rosiest damsel in seven States."

The men who were selected to do the fast telegraphing at Creedmoor during the great International Rifle Match, were Messrs. Charles F. Bennett, Thomas H. O'Reilly, Charles F. Jennings and Ed Miller, all of the main office.

An operator whose highest aim and ambition has been to work at 197, says that New York boarding mistresses, like the rest of mankind, have their weak and strong points, the weak point being their coffee and their strong point the butter.

At the dedication of the Soldiers and Sailors monument in Boston, September 17th, Thomas M. Miller, the printing operator, carried the flag of his old regiment. During the war, Miller was color sergeant of the first regiment of Massachusetts infantry, and partook of the hospitalities of Libby Prison and Castle Thunder.

"A message from the sea." Marine Chief Weller has been appointed superintendent of the Law Telegraph wire which runs into 197 Broadway. Mr. Weller had just returned from a trip to Niagara Falls and the Thousand Islands, when he was officially notified of his promotion. True merit sooner or later is sure to be recognized, and the worthy chief bears his honors with becoming modesty and pride.

"Baldy" created quite an excitement, recently, by the announcement that Mr. Weller had purchased THE OPERATOR. Those who, in times past, have attempted to "bulldoze" or "intimidate" Mr. Weller, began quaking in their shoes at the merciless castigations, natural to be expected when the round ex-Chief of the Marine Department assumed control of its editorial columns. Their fears were, however, subsequently allayed, when it was stated that he had bought THE OPERATOR—for five cents—at the news stand on Broadway.

The operating room, which was badly disfigured by the burning of the switch, has been thoroughly renovated, with the exception of a few finishing touches, and presents a handsome appearance. The burnt switch has been removed section by section, and replaced by a new one which is in every respect equal if not superior to its predecessor. The wooden flooring on the visitors' gallery has been replaced by a light iron structure—in fact, as far as possible, all wood-work around the switch has been removed, and replaced by iron. The thorough manner in which the work has been done, without in the slightest degree interfering with the transmission of business, really speaks volumes in favor of all concerned.

"I never care to be away from my desk much," remarked Eddie Boileau, as he leaned gracefully back in his chair. "If I'm away one day I notice it in my sending; if I'm away two days whoever works with me notices it; if I'm away three days Jones bounces over to the wire and says 'sign!'"

"I knew an imp of perversity once," replied John Oakum, as he gave his mustache another twist, "who used to burst right in on the press wire I was working about eleven o'clock every night, and go through the most horrible contortions I ever had the misfortune to listen to. But it was different with him. If he stopped one night all the boys noticed it, and felt like clabbing together to buy him a little private line for his own special use. If he didn't stop for two nights, they all wrote the superintendent to notice it as a nuisance, and if he didn't stop for three nights, each of them looked up his six shooter and swore he would shed the vile interloper's blood, or perish nobly in the attempt like a fly in a cup of coffee," and John sighed a sad, far away sigh, and relapsed into silence.

Our Summer Men.

We were being unmercifully rushed just as a member of the *freshman* class leaned over the desk, and asked, "Are you the correspondent of THE OPERATOR?" Thinking he had got on the track of an important item, we at once opened the key, and hastily informed him that we occasionally did something in that line. "Well," continued the youthful aspirant, "You ought to give us summer men a good notice." After giving the subject a second thought we concluded it would be too bad to let such a man (?) go unnoticed. He is of the class that never breaks, never was known to make a bull, or at least acknowledge one, has every message "just as it was sent"—notwithstanding all of these good (?) points, we often find messages received by "Ch" containing such little errors as, *eighth city* for *eight-thirty*.—*Will C* for *Willie*—and many others too numerous to mention. X. Y. Z.

ALBANY, N. Y.

Resolutions of Respect.

At a meeting of Telegraphers held at the Dickinson House, Corning, N. Y., Sept. 21st, for the purpose of adopting resolutions on the decease of operator Chas. T. Skinner, Mr. Yost was elected chairman, and appointed as committee, H. S. Edson, T. E. Walsh and Geo. A. Brown. The following resolutions were adopted:

Whereas, it has pleased Divine Providence to remove from our midst our esteemed and worthy brother, Chas. T. Skinner, be it

Resolved, That in his death the fraternity have sustained an irreparable loss, and the community with which he resided part with a worthy and respected citizen. That the corporation by whom he was employed has parted with a faithful servant, whose strict attention to his several duties had so identified him with its interests, that the vacancy will not be easily supplied.

While the profession deeply feel this dispensation of Divine Providence, they sincerely sympathize with the afflicted family, who feel greater than we the absence of a dutiful son and affectionate brother.

Resolved, That the foregoing be published in the Corning and Susquehanna papers. Also, in the *Journal of the Telegraph*, and *OPERATOR*, and a copy sent to the family of the deceased.

The Telephone in Mining Operations.

Prof. Bell's telephone was recently tested in one of the large English mines, and proved a great success. Every word from below was plain and clear; songs, and even whispers, were distinctly heard, and on being questioned from above those below replied that they could hear the whistle of an engine on the line. The wire was cut in the mine, and two persons joined hands in keeping up the connection between the main piece and the end. These gentlemen constituted the conducting medium for the electricity, and the conversations were as plain after the severance as before. It was agreed among all the practical men present that nothing was wanting to make a telephone a great success in mining operations, seeing that an electric bell can be attached to the wire which conveys the sound, and be worked without additional trouble. Thus the attention of men at the surface could be instantly secured, and communications carried on with the greatest speed and accuracy from the bottom of our deepest mines.

An Engine Struck by Lightning.

An incident of a recent thunder-storm, as noticed by a passenger on a train on the New York Midland Railroad, is thus described by the *Middletown Press*: "The train was in the vicinity of Walton. The storm was terrific. Crash after crash of thunder with blinding lightning, accompanied by a deluge of rain and hail followed them. At one time the train seemed to be enveloped in a sheet of electrical fire. A fearful crash preceded, and instantly the engine was in a volume of electricity; balls of fire encircled the driving wheels as they revolved with lightning rapidity. Engineer Sanford beheld the phenomenon with wonder and awe, and supposing that the end of all things was at hand, involuntarily shut off the steam. Nearly every person on the train experienced a severe shock; a large tree by the track was shattered. The shock lasted but a moment. When satisfied that nothing had been injured, the engineer started the iron horse on with a loud whistle toward Norwich.

The Electric Candle.

Speaking of the electric candle, the Boston *Traveler* says: "There never was anything done for the lighting or for the enlightening of the world that was not denounced at the beginning by the world's wisacres."

The statement is true in the abstract, but rather strained in the concrete. The electric candle has not suffered, so far as we can discover, from any persecution. The main thing which stands in its way is its cost. The expense of producing electricity is such that until some further discoveries are made in that direction the electric candle will not be available for any general use. Jules Verne, in his story of Captain Nemo and his ship "Nautilus," runs the latter by electricity evolved, "by a peculiar process" from the sea-water. When that "peculiar process," or one similar to it, is discovered in fact, instead of in imagination, then, and not till then, shall we be able to use the electric lamp for general illuminating purposes.—*Cincinnati Times*.

ELECTRIC LIGHT IN MINES.—Mr. Reece, an English engineer, suggests the necessity of all mines being provided with electro-light apparatus. We read that attempts to rescue the unfortunate Pontypidd miners were at one time frustrated by the extinction of the lights, and those who have noticed the very feeble light given by the safety lamp must appreciate the extreme difficulty under which the miners engaged in freeing their comrades must have worked. The electric lamp is subject to none of these objections; it affords a most brilliant light, as it is independent of air. It can be so surrounded with glass as to render it impossible either to fire the explosive gas or to be extinguished by any blast of air; it affords a continuous light for many hours, and as the electric current is daily conveyed from England to America, there would be no difficulty in having this brilliant light in the deepest part of any mine. The electricity used in the mast-head lamp of the Royal navy is produced by the steam engine; as steam power is constantly at work in the mines, there could be no difficulty in generating sufficient electricity to afford, in cases of accident, a most brilliant light to the miners while endeavoring to save their comrades from the painful death of starvation.

Answers to Correspondents.

E. H., New Haven, Conn.—It would be difficult to find a galvanometer needle suited to your wants. Full instructions as to the mode of making one may be found in *THE OPERATOR* of June 1st.

J. H. F., Waco, Texas.—Four telephones constitute a set, two at each end of the line. This allows of one being placed at each ear, or one at the mouth and the other at the ear, as the operator elects. Circulars will be forwarded as soon as obtained.

PERSONALS.

Col. A. M. Eastman, the projector of the Direct Cable, is dead.

Mr. Jacob Levin of Sedalia, Mo., has been appointed manager of the Atchison, Kansas, Western Union office.

Mr. W. W. Livingston has resigned his position as agent and operator at Edwardsville, Kansas, to go to Topeka as clerk in agent's office, K. P. R. R.

The Atlantic and Pacific line has been run into the military telegraph office at Yuma, A. T. Mr. Phillips manager of the latter does the transfer business.

During the illness of the regular operator, a little girl only ten years of age carried on the business of the Martinsville, Miss. office, on the Jackson railroad "in a very creditable manner."

Mr. Wm. Saunders, of London, proprietor of "The Central News" Telegraphic Agency, has arrived here, and will spend several months in the United States, visiting almost every part of the country.

N. F. Harrison of the Atlantic and Pacific, Milbrae, Cal., has been transferred to Castroville, vice E. H. Snedaker promoted to the ticket office S. P. R. R., San Jose, in place of O. C. Flanders. C. S. Green takes charge of the Milbrae office.

On account of the "pooling" of W. U. and A. and P. Companies, the latter company have taken their wires out of Warder Mitchell & Co.'s office, Springfield, (Lagonda) Ohio, leaving the Western Union to "have it out" with G. W. La Rue, manager at that point.

Mr. Charles S. Malony, assistant manager of the I. O. Telegraph Co., at Key West, Fla., was married on Tuesday evening, August 28th, to Miss Ida Lowe of same place. The *Dispatch* says it was "one of the most brilliant weddings which we ever had the pleasure of chronicling in our city."

Mr. John W. Parsons, manager Western Union main office, Springfield, Ohio, was duly sworn and bond approved, Sept. 1st, creating him treasurer of Clark County, Ohio, for a term of two years. His position at the Western Union office will be ably filled by Mr. Frank P. Enoch ("Fk") formerly chief operator, with Jakey Brugger as assistant.

A TELEGRAPH MAN STRUCK BY LIGHTNING AND KILLED.—On the afternoon of Aug. 13, while Joseph Boyd, Jr. was repairing the wires on the Air Line Railroad, a short distance from Longview, Georgia, he was struck by lightning, and died in a few minutes thereafter. John A. Boyd, another telegrapher, who was close by, was so terribly shocked that he

lay insensible for twenty-five minutes. The deceased was at one time connected with the Western Union, and his untimely death is deeply regretted.

The New London correspondent of the *Norwich Bulletin*, says John Riley, familiarly known as "Jack" Riley, an expert telegraph operator and three years ago employed in the Western Union telegraph offices in both this city and Norwich, was recently married to a French lady of wealth and refinement residing at Chatanooga, Tenn. "Jack" hails from Hartford, Conn., has seen many a dark day in his career, and now enjoys the brighter aspect of life, at which state of happiness his many acquaintances both here and at Norwich will rejoice.

ALBANY, N. Y., PERSONALS.—In the N. Y. C. and H. R. R. office, Mr. Van Antwerp has been appointed chief operator, in place of John D. Noland, who has accepted a position in the office of Kellogg & Millers, Oil Works, Amsterdam, N. Y. Thomas Powers succeeds Mr. Van Antwerp. Mr. Allen has been dismissed, and Perry Chamberlin, champion of the *freshmen*, appointed to fill the vacancy. In the Atlantic and Pacific office, Clarence Miller, G. P. Menmuir. James Parson and W. D. Chandler have been notified that their services will not be required after October 1st, which looks a little as if that shop would soon be closed. Mr. Chandler has been fortunate in securing a place with the Western Union at Hartford, Conn.

I. C. R. R. NOTES.—Messrs. Pushee, McDonald, and Cummings are the efficient dispatchers. On the Chicago division: Harry Ward is at Weldon, and another brother Ward is at Kensington. "Papa" Tullis is located at Homewood; Mrs. M. J. Powers at Matteson, (days), and Ed. Miliken, nights. Ed. is a great lover of flowers and birds, having the office full of them, and priding himself on keeping a nice clean office. Miss North is at Monsee, and Tommy Collins at Peotone. Osborne (days) and Knight (nights), are at Kankakee. "Double-you, double-you, too," is day man at Gilman, and M. J. Fleming (the ladies' man) is night operator. Lou Baldwin is at Onarga, and Mr. Rankin, who contemplates taking a partner, is at Bulkley. Miss Mather is at Leoda, Mr. Fleming at Paxton, Mr. McKelvey "runs the machine." Mr. Udell is at Rantoul.

BOSTON AND ALBANY R. R. — S. AND A. DIVISION.—At Springfield, Johnny Donohue is at the General Superintendent's office; night man Henry Ward is off for several months' vacation, his place being filled by Alton Beers, late of Chatham village office. At West Springfield Mr. Anable fills the place of Miss Lizzie Roberts, resigned. At Hinsdale there have been numerous changes: During the absence of Miss Ida Cross her place has been filled by Miss Emma Fraser, of Chicopee Falls and Miss Mary Bond. Henry Holbrook works nights. At Dalton depot Mr. Adams, formerly operator, is now agent. At Pittsfield Miss Wilcox is at the depot (Q) office. A new office has been opened at Cheshire, with Miss J. A. Bowen as operator. Mr. Frank Elliott, formerly of Chatham Village, N. Y., office, but now of Jersey City, recently made a visit home, staying a few days. At the assistant superintendent's office, Greenbush, Mr. Smith the day operator is off, and Mr. Mack, of the night office, is filling his place. The night men are all anxious to see "Mack" return to night work, much as the day men would be sorry to lose him. There has been a heavy rush of business lately, but Manager Donohue, of B. and Q. wires, has kept everything working smoothly. The B. and A. R. R. has as nice a lot of operators as any New England railroad.

BIRTHS.

Sept. 15th, to Frank L. Thirkield, agent and operator, D. and M. R. R'y, Anna Station, Ohio, a fine boy.

Sept. 20th, to M. H. Sellers, chief operator at Sellersville, N. P. R. R., a fine daughter. Second edition.

MARRIAGES.

SMITH—BOONE.—September 13th, at the residence of the bride's parents, Harrisburg, Pa., by the Rev. J. T. Judd, Mr. Virginius P. Smith to Miss Katie B. Boone.

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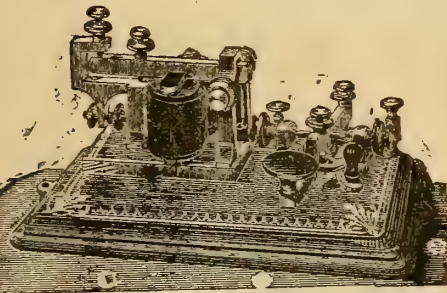
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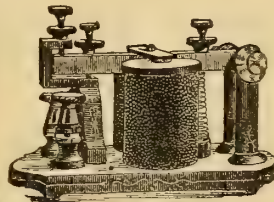
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VOL. VIII.

NEW YORK, OCTOBER 15, 1877.

No. 4

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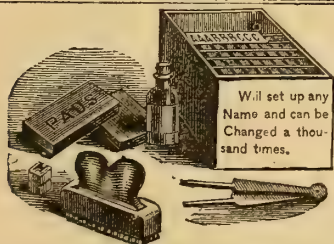
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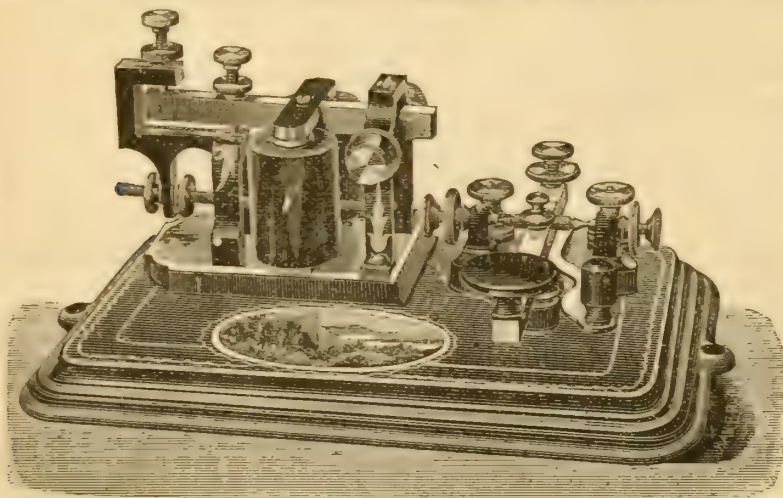
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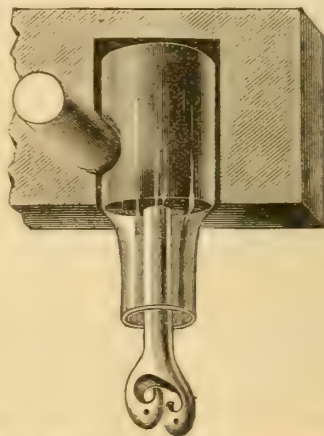
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THE OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY

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Sometime.

Sometime when all life's lessons have been learned,
And sun and stars forevermore have set,
The things which our weak judgment here have spurned,
The things o'er which we grieved with lashes wet,
Will flash before us out life's dark night
As stars shine most in deeper tints of blue;
And we shall see how all God's plans were right,
And how what seemed reproof, was love most true.

And if sometimes, commingled with life's wine,
We find the wormwood, and rebel and shrink,
Be sure a wiser hand than yours or mine
Pours out this portion for our lips to drink.
And if some friend we love is lying low,
Where human kisses cannot reach their face,
Oh, do not blame the loving Father so,
But bear your sorrow with obedient grace!

And you shall shortly know that lengthened breath
Is not the sweetest gift God sends his friend,
And that sometimes the sabbal pall of death
Conceals the fairest boon his love can send.
If we could push ajar the gates of life,
And stand within and all God's workings see,
We could interpret all this doubt and strife,
And for each mystery could find a key.

But not to-day. Then be content, poor heart;
God's plans, like lilies pure and white, unfold.
We must not tear the close-shut leaves apart—
Time will reveal the calyxes of gold.
And if through patient toil we reach the land
Where tired feet with sandals loose may rest,
When we shall clearly know and understand,
I know that we will say "Our Lord knew best."
H. C.

A Lady's Interesting Reminiscences of a Summer in the Country.

That was a very interesting interview between the lady operator and the reporter, published in the last issue of THE OPERATOR. Like the rest of her sex, she seems to be a very good talker, doesn't she? I often wonder why it is that THE OPERATOR contains so few articles from the pens of lady telegraphers; and with a view of encouraging some of my bashful sisters in art, who, I am quite certain, are fully capable of the task, to favor their male colleagues with an occasional piquant and spicy sketch—if for no other reason than to show that we do not all consider them hyenas—I shall try and give you an account of my experience in the country during the past summer, and tell you something of the people I met there.

I didn't feel very well last spring. Close confinement, the doctor said, and suggested that I try and spend a few months in the revivifying atmosphere of the country. A friend who keeps a summer hotel offered me the situation of operator. I accepted, and, telling my friends that I was "going in the country for the summer," packed my trunk, shook the dust of the great, bustling city from my feet, and bled me away to the shores of the clear and sparkling Silver Lake, on which the hotel is built.

Oh! what a delightful change that was from the ceaseless hum and dull routine of the office! As I sat near the edge of the lake, from whence a grateful breeze arose and fanned my forehead, I used to close my eyes, and imagine that I was soaring away through endless space to a far brighter and more enchanting world than this. And as the trees gave a lazy rustle, and I could feel the genial warmth of the sun for a moment upon my cheek, or hear the tinkling of the water at my side, I tried to close my eyes still firmer, and say, in the words of the song, "Ah! do not wake me, let me dream again."

My salary at the office was small, but so was the volume of business. I suppose it is hardly my place to criticise, but there were one or two as poor operators on that wire as I ever want to have anything to do with. The one at Sandy Hill positively broke so often that I never for the life of me could tell

whether he was sending or receiving! By the way, he invariably dated his messages as coming from "Handy Pill," and it was better than a circus to hear the encounters he sometimes had when new men came on the wire. "Handy Pill?" they would repeat; "Papa," he would rejoin, good-naturedly enough, "you don't seem to be able to take me very well." "No," they would reply, "you are decidedly the worst pill I ever attempted to take." Then he would make a few dots and try once more. Again the same old "Handy Pill," and the receiving operator would break in with a provoking "???" At this point he generally lost his temper, and remarked, petulantly, "I guess you are not familiar with that name?" to which the other would respond, "I am not familiar with that kind of sending." But although where regular business was concerned his sending and receiving were slow and painful, in conversation he managed to acquit himself remarkably well—probably doing some pretty tall guessing. He seemed to be very fond of poetry and poetic language—and also of your humble servant. Why he thought so much of me I'm sure I don't know, for he never even saw me, but the avowals of undying affection he used to send over that senseless wire were both frequent and fervent. It was too funny for anything. I told him, for a joke, that I belonged to Germany, had only been in the country four months, and could talk but little English. He said he always liked the Germans; alluded incidentally to his own sweet nature and loving disposition, and declared that he "knew we would get along first rate together." Then he told me he was coming up to see me—if he could get a pass; and I lived for several days in abject terror lest he might come and dispel that German illusion. One night Deenville called me, and said that Mr. Ross, of "Handy Pill," was there. I recognized the sending, and replied, "Well, what of that?" Although he had traveled seventeen miles, and was now within four of my office, he didn't come on, but took the next train back to Sandy Hill. I felt immensely relieved, especially as he treated me very coolly ever after.

The Deenville operator had the finest temper I think I have ever seen—for a telegrapher. He was very interesting in conversation, too, and so polite and nice that I asked him to come down and show me how to make out my monthly statement. Well, I wish you had seen him! In he walked that evening as stiff as a poker, and as awkward as an elephant. He had fiery red hair, a rough, harsh, blotched face, and clothes that fitted him decidedly too much. He never attempted to remove his hat, sat down on the seat that I offered him with a thud, and scarcely uttered three words all the time he was there. I was horribly disappointed in him, but tried to draw him into conversation. It was no use. He only answered in monosyllables, or stared vacantly at me, "ears agog and eyes set open wide." Finally I asked him if he had ever seen THE OPERATOR. He gave a start that quite frightened me, and eagerly inquired, "Who's he?" I told him, and showed him a copy, and he was quite delighted with it. That rigid manner didn't wear off until he rose and got hold of the key. Then he seemed quite at home. Calling the other offices he informed them, with evident pride, that he was in my office. He was the queerest fish I ever saw.

One of the Boston men spent a few days at the hotel. He was a magnificent operator, and insisted upon sending and receiving all the business while he was present. I thought a great deal of him. He is engaged to be married to a very handsome, and I doubt not loving and amiable, young lady; and for one, I hope that when their tiny bark is launched upon the great untried sea of matrimony, sunny skies and genial weather may ever attend them.

Another gentleman stopped at the hotel who a few years ago left the business and went in partnership in an extensive hardware store. Rumor says that the world has prospered with him, and he is reputed wealthy. If I mentioned his name, many "old-timers" would doubtless remember him. He told me some very laughable anecdotes concerning the early days of the telegraph. I only remember a few. When the combination printers first came out, an operator (sending N. Y. No. 51—LI on the printer—sent it "from Long Island, N. Y.," and the receiving office wanted to know "if we check Long Island direct." Some of the bulls he told me were very funny: "Nary dix at three o'clock," for Leary died at three; "Boston Tripe Foundry" for Boston Type Foundry; "David goes up this evening on a spree," for this evening on Osprey; "Col. Gilbert, a fierce editor of the Valparaiso Vidette," for Col. Gilbert A. Pierce, etc.; "Holyokems" for Holyoke, Mass, etc. Then he told me of Charley De Moll, and the Franklin strike of 1869; also of the

Western Union strike the January following. Of the unique yet pathetic message which Mr. Rice, of Albany, sent on that occasion, when the several circuits were forwarding reports to the headquarters of the T. P. L.: "We are all out;" of the ladies who were ostracized by the amiable managress Snow, for nobly leaving their desks to co-operate with their male colleagues in maintaining their rights; of the unavailing of the Morse statue in June, '71; the speech by Geo. K. Walcott on behalf of male and J. D. Reid of female operators; of the earnest but misguided youth who, as Prof. Morse, amid solemn and profound silence, signed his name to the farewell message over the wire, clicked out, "Bully for Father Morse!" of the 2,731 words sent in an hour by N. J. Snyder and received by W. P. Phillips; and of a very rich episode in the life of Mr. Swain, of Chicago. In 1869 the rival companies were trying who should get Grant's message through in the shortest time, and Swain, considering himself the best operator in the office, sat down to No. 2 wire. The rest of the gents enjoyed a good laugh at his expense when the following message was received: "To Swain, Chicago: Put a better man on No. 2—Stumm, Cleveland."

On the Sunday after the above conversation had taken place, I wandered off after dinner toward a cozy nook on the edge of the lake that I greatly admired. Before reaching the spot I found my telegraphic friend sitting on the trunk of a fallen tree, smoking a cigar with evident relish, but apparently completely lost in thought. I tripped up to him lightly, and awaited a recognition. But he only kept his eyes intently fixed upon the ground. His face wore a look as hard and cold as steel, utterly devoid of warmth or expression. His brows were contracted in sharp, deeply-set lines, and as the smoke from his cigar ascended in lazy wreaths over his head, he raised his eyes and seemed perfectly unconscious of everything around him in watching the blue rings as they expanded to their greatest extent, and finally burst and became lost in the surrounding air.

I felt that I was intruding, and attempted to retreat, and leave him alone with his thoughts. But something bade me stay. I waited a few moments, and then said, softly:

"Are your thoughts of so very pleasing a character that you cannot afford to interrupt them by recognizing a friend?"

He looked up with a startled, frightened expression, as if he had just been discovered in the act of committing some heinous crime, and said, apologetically:

"I beg your pardon, Miss —, but I was thinking of the past, and quite forgot myself."

"I did wrong to disturb you," I said, sympathetically. "Perhaps you prefer to be alone."

"Oh, no! not at all," he replied, sadly. "To me recalling the past possesses an unaccountable fascination, but is nevertheless extremely unpleasant, as the picture presents little save a few faded flowers—dry, dead, withered remains of rosebuds that once blossomed, oh! so sweetly, and shattered remnants of many once bright air castles which have crumbled into ashes among my fingers. But there, there! I must not cast a cloud over your bright nature by talking upon this disagreeable subject. Tell me something about yourself, and dispel this fit of the blues."

"Believe me, I sincerely feel for you," I said, in a tone of as great tenderness as I could utter the words. "So far as my own experience goes, I have often found great relief in telling my troubles to another whom I knew would sympathize with and perchance be able to aid me. I should like to ask you to make a confidant of me—speak as freely to me as you would to a sister, if you can, and tell me precisely what the trouble is. I promise that if I can in any way be of service to you, I shall render that service willingly."

He looked at me steadily for several moments, seemingly absorbed in thought, and at length said:

"Thank you. I think you are right, and if you will take that seat I shall make you acquainted with a little of my history."

He whirled his cigar into the lake, turned around, and, looking squarely into my face, went on:

"I am a man with whom business has prospered, upon whom the fickle goddess Fortune has smiled, and who is even secretly envied by the world for what it is pleased to call my success in worldly affairs. Yet I feel as I sit here to-day that in the only thing in this world worth striving for my life has been an utter and complete failure."

"Two years ago to-day a life went out in which was bound up my entire existence. A heart ceased to beat which had never before failed to quicken its

pulsation at my coming; feet were stilled forever that had often lightly run to welcome me; eyes became cold and glassy and meaningless that so recently were wont to light up with joy at my approach, and a voice—the sweetest, to my mind, in all the world—was hushed forever. Two years ago to-day the woman whom I had chosen of all the world to be wife lay dead! Is it any wonder that I feel sad on this the anniversary of perhaps one of the greatest calamities that can ever happen to a man of a highly sensitive and loving nature?

"She was not my first love. Four years ago I had charge of the office at Sedalia, Mo. Regularly every morning and afternoon a young girl of about seventeen passed the office on her way to school. I knew the time, and always managed to be at the window when she passed. I don't know how it was, but any morning that she happened to pass without looking in or smiling I was sure to feel out of sorts all day, and when I caught that sweet, modest, lady-like smile in the morning, it remained with me like a genial ray of sunshine throughout the day, illumining my pathway—thorny enough it was, too, sometimes, God knows!—and cheering me as nothing else seemed capable of doing. After a while I used to go to the door and greet her with a pleasant nod, and finally I even went so far as to raise my hat and say 'Good morning,' and 'Good afternoon.' I used to imagine that she walked more slowly as she passed the office, and one afternoon I spoke to her—just a few words. After that she generally stopped a few seconds on her way home every afternoon to ask me something about electricity and the like. Then we managed to meet pretty often, kind of 'accidentally on purpose.' The more I saw of her the more I liked her, and in due time we had come to love each other with that sweet, pure, guileless affection which the world too often sneeringly designates schoolboy's infatuation. I loved her with all the warmth of my enthusiastic nature, and to be in her company always gave me a feeling of exquisite pleasure. It did not matter whether I spoke to her or not, to be near her seemed to be all that was necessary to render me completely happy. The great, cold, suspicious, matter-of-fact world would doubtless find fault with us, and say that a few years and a little more experience would show us that we did not really care for each other. I don't know what she thinks, but for my part, the recollection of those delightful moments spent with her will ever be looked back upon as one of the greenest spots in my existence.

"But she was the only daughter of an eminent physician of the place, a man too rich and haughty and proud to hear of her marriage with a poor, obscure telegraph operator. She was forbidden to speak to me. My character was even assailed, and an effort made to induce the superintendent to have me transferred. Although smarting under this injustice, I showed her father that I was at least a gentleman. I loved his daughter too dearly to stand in her way, and I knew that I was not worthy of her, and on my meagre salary could not offer her as good a home as she had been accustomed to under the paternal roof. I therefore made up my mind to bow to the father's wishes and—difficult as I knew the task would be—try and forget her. When I saw her and announced my determination, she said she felt prouder of me than ever before, and as the time came to say farewell—a long, last farewell—I thought her heart would break. Leaning her head confidingly and with absolute helplessness upon my breast, she sobbed so piteously that my courage almost failed me, and I had to literally tear myself away. The next morning I forwarded my resignation to the superintendent. I could not stay any longer in the place.

"I went to New York and obtained employment at 145 Broadway. I thought that amid the excitement and confusion of a great city I might forget her. But I couldn't. That gentle, loving face, and sweet, frank smile ever haunted me. At a busy wire all day I was at least partially successful; but in the evening I felt so lonely and desolate, and utterly forlorn, that to drown my sorrows and deaden my feelings I had recourse to the intoxicating cup. But oh, what a hollow mockery that is! As Byron says:

"Though gay companions o'er the bowl
Dispel awhile the sense of ill,
Though pleasure stir the madd'ning soul—
The heart, the heart is lonely still."

"About this time a daughter of the lady with whom I boarded displayed a very kind interest in me. She asked me if I knew what my present course would inevitably lead to—certain ruin of both body and soul. She not only warned me of intemperance, but spoke earnestly and feelingly of God

and Heaven. Her sympathy touched a chord in my heart long dormant, and in all probability rescued me from being now classed among the great army of drunkards. My heart yearned after sympathy, and I needed pleasant conversation to make me forget the past. These I got from her, and you will not perhaps be surprised to learn that my gratitude soon ripened into deep respect, and finally by degrees into sweet, pure, manly affection. My heart had been bruised and crushed, and there was a great void there which only a woman's love could fill.

"As time wore on I discovered new beauties in her character, grew to love her more dearly every day, and at length proposed for her hand, and had the satisfaction of becoming her accepted lover. A friend having offered me a half interest in his hardware establishment, my father advanced what money I required, and I left the telegraph business to engage in the new pursuit. The business was remunerative, everything seemed to go well with me again, and as I saw the sun bursting forth in all its splendor from behind the cloud that had obscured its genial rays so long, I felt very happy. It is only the man who has experienced such a calamity as I had that really understands the full meaning of the word happiness. 'Spring,' you know, 'would be but gloomy weather if we'd nothing else but spring.'

"We were to have been married in November. But on the 21st of July, while traveling on the Long Island Railroad, on her way to visit some friends there, the train came into collision with a freight train. Several of the passengers were killed, and herself so seriously injured that she died the following morning, July 22d—just two years ago to-day. What a terrible shock the message announcing her death gave me! I shall never forget it, and, indeed, question whether I shall ever be entirely myself again. The thought struck me that it was a direct dispensation of Providence; that I had not thanked Him as I should when He sent prosperity to me, and that He in his wisdom considered it necessary to speak to me thus harshly by making me once more drink deep of life's dregs. But I rebelled against the decree, and said, 'If He speak to me thus, I shall never hear!' I have since come to look at it differently, however, and tried in all faith to say, 'Thy will be done.' Since then I have had little inclination for pleasure or amusement of any kind. I feel that my lot has been an exceptionally hard one. Few know how wretched and miserable, how cold and dreary and desolate is a life such as mine. Disraeli says that life without love is worse than death. Without this essential and pervading charm how vain and void, how flat and fruitless appear all those splendid accidents of existence for which men struggle. Yes! without this transcendent sympathy, riches and rank and even power and fame are at best but jewels set in a coronet of lead.

"I remember once reading an article which spoke of the future as being always a fairy land to the young, and so it is. At first life is like a beautiful winding lane, on either side bright flowers and beautiful butterflies and tempting fruits, which we scarcely pause to admire, so eager are we to hasten to an opening which we imagine will be more beautiful still. But, by and by, as the trials of life thicken, and the dreams of other days fade one by one in the deep vista of disappointed hope, the heart grows weary of the struggle, and by degrees as we advance the trees grow bleak, the flowers and butterflies fail, the fruits disappear, and we find that we have arrived to reach a desert waste. At least such, I am sorry to say, my life has been."

"I beg your pardon," I said, as he paused, "but what about the Sedalia young lady? Did you ever hear of her?"

"Yes," he replied. "I saw the announcement of her marriage to Judge Wilson, about a year and a half ago."

"As we walked back to the hotel I was so much absorbed in this wonderful romance of real life, and he seemed so completely occupied with his own thoughts, that not a single word passed between us.

* * * * *

Since writing the above a letter has been handed me. It is from the gentleman whose story I have just related, and says:

"DEAR MISS —: I think you said you would return to the city some time in September. It would give me great pleasure, with your permission, to renew the pleasant acquaintance begun on the shores of the beautiful Silver Lake. Please say if I may call sometime, and what evening you would be most at leisure.

Believe me, very sincerely yours, ———"

What answer shall I give him?

HELEN.

Old Mr. Barlow.

For a wonder business has been slack on No. 50 to-day, and I've been tilted back in my chair, idly gazing out of the window at the beautiful view that stretches out before me. The soft music of the autumn breeze sighing through the woodland lulls one into forgetfulness of the present, and memory leads me back through the long vista of years, until lost in a day dream I seem to live over again the days that are no more. Back wander my thoughts o'er many pleasant scenes, and at last rest on the happiest, brightest days of my telegraphic career; those spent on the K. and B. R. R.

The figure of the then superintendent of that division rises prominently in the foreground of the picture memory paints, and I see him, genial, kind, a favorite with the boys, and yet, withal, a man of many eccentricities. His *sobriquet* among the boys was "Old Mr. Barlow," and under that cognomen I shall endeavor to sketch some of his peculiarities, and the various changes which after years have brought to those at that time around him as operators.

We were a merry, fun-loving set, and it afforded us much amusement to notice some of Mr. Barlow's eccentric ways and orders. Very frequently the night dispatcher would have a report of some sleepy owl who had failed to answer the half hour roll call, or falling asleep had stopped and delayed the through Columbia mail, or, by some sonambulist feat, kept the wire open all night. "Well, confound those fellows, they bother the life out of me," would be the ejaculation of Mr. Barlow—in fact this was his favorite expression—and the following never varying message would be sent.

"To operator—The very next time you stop the Columbia mail, it will cause your dismissal."

I have known Dick Bender, night man at "Pine Run Tank," to receive three or four messages as above in a week, and still retain his position.

If upon entering the operating room he accidentally upset a spittoon, he immediately proceeded to toss the same out of the window, and post the following order on the notice board. "The first man who spits tobacco juice on the floor, or orders a spittoon for this office, will be suspended." In the course of a week the usual number of spittoons graced the office floor; the boys expectorated in the same—the floor receiving its usual share—and no suspensions occurred.

The Womens' Crusade Union would have made an idol of "Old Mr. Barlow," if that strong-minded society had been in existence during those days, for it was his proud boast that he "never touched a drop of liquor in his life." But, alas! "Pride goeth before a fall." Two or three days before Christmas, Mr. Barlow was forced to visit a city about a hundred miles distant, on some important business. Before his departure, he called Charley Suydam, the manager of the office, and said, "I will be absent until Monday morning; now, Charley, look out for everything, I leave the office in your charge, make the office hours for Christmas day and night to suit the business," and with several other orders he departed. The boys, with Charley as their leader, then planned to have a grand supper in the office on Christmas night, and sent out invitations to the operators in the American Telegraph Company's office, also to two or three conductors on the railroad. So Christmas night found a merry party of twelve or fifteen assembled in the large room adjoining the operating room. The old, old saying, "When the cat's away, etc.," was fully proven, and a few of the timid ones were now the boldest.

Charley and Wes Vankirk had brewed a large punchbowl of eggnog, and this stood in the center of the table, which, by the way, fairly groaned with the fine catering of Army Hughes, the noted "restaurant," and all was going "merry as a marriage bell," when a quick rap was heard on the front door. The punchbowl was instantly removed to an adjoining room, Charley opened the door, and started with unfeigned surprise on beholding "Old Mr. Barlow."

"Now we are in for it!" exclaimed several of the boys, as Mr. Barlow walked into the impromptu dining room, but not so; for that kind old gentleman merely rubbed his hands with evident pleasure at sight of the good things before him, and remarking, "Well, well, boys, this is something I did not anticipate," immediately took a chair at the table, and proceeded to make an attack upon the ample spread. This kindly action of the superintendent instantly put the rest of the company at their ease. He had rushed through his business, and returning by special engine, reached home unexpectedly. He could run a special engine that night without the aid of telegraphic orders, or fear of an

accident, as the trains were all discontinued Christmas night, so he had surprised the supper company, and "just in nick of time," he said, with an inward chuckle. "Twas one of 'Old Mr. Barlow's' studies what he should eat and drink—and the sight of a good supper, especially after his long, uncomfortable ride, had smoothed everything for Charley and the boys. Presently they thought of the eggnog which was "wasting its sweetness on the desert air," and Paul Diver winking at Charley, asked where he had put the "Floating Island." "Floating Island!" exclaimed Mr. Barlow, "well if there is anything in this wide world I do love, it is 'Floating Island,' bring it in boys, if you have any, bring it in." The punchbowl was returned to the center of the table, and the first bowlful passed to Mr. Barlow. Then the "song went round," that is, the eggnog went round, and as there was a song in each glass, soon they were a merry party. Mr. Barlow passed his bowl to be replenished again and again, saying that it was the best "Floating Island" he ever tasted. But soon the "fire water" commenced to tell on him, and the boys at last carried him from the chair to his sofa in a profound sleep, and then enjoyed themselves until five o'clock in the morning.

At the close of the festivities a few of the "solid men" put the office in order, and left "Old Mr. Barlow" slumbering on, and slumber he did 'till one o'clock Sunday afternoon. Proceeding home he told his wife all about the supper and the precious "Floating Island," attributing his long sleep to his fatigue and late supper, and his fearful headache to the same cause.

Every time Mr. Barlow commenced with "I never touched, etc.," the boys exchanged a sly glance, and secretly laughed over their remembrance of the number of times he had passed his bowl for "Floating Island" on a certain Christmas night. The story was too good to keep, and at last Mr. Barlow learned how he had been victimized. At first he was inclined to be angry, but his good nature prevailed, and he joined heartily in a laugh with the boys.

A number of years have glided by since then, and the boys who participated in that jovial gathering are scattered far and wide—Charley Suydam, train dispatcher, Toledo, Ohio; Ike Vandusen, Ed Brock, Johnnie Truex, Mit Maitland, train dispatchers, Penna. Railroad; Jake Mullen, conductor, Union Pacific Railroad, Omaha; George Horsefall, in cotton business at Dallas, Texas; Wes Vankirk, Cotton Exchange, N. Y.; Charley Norris, treasurer for Pullman Palace Car Company, Jersey City, N. J.; Bob Morris, mechanical engineer, W. U. Co., N. Y. Mr. Barlow is superintendent of a thriving railroad, with a brilliant and perchance famous future before him.

Slowly fade the glowing colors from Memory's canvas, as the sun sinks amid brilliant fleecy clouds; the shadows lengthen on the hillside; twilight hush is near, and the rustling leaves that sweep lightly by, seem to sigh "Old Mr. Barlow."

STARACE.

The Use of Electricity in Modern Warfare.

The important role played by electricity in modern warfare affords an excellent example of the influence which science has of late exerted in naval and military affairs. It is no isolated example of scientific warfare that we have here to deal with, for the electric fluid has in a great measure changed our whole practice of war, and bids fair to revolutionize it still more in the future. Every soldier or sailor if he desires to make his mark must be something of an electrician, for there seems to be no limit to the useful applications of the galvanic spark in battle. Broadly we may divide these applications under three heads—namely, the employment of electricity for signaling, for the explosion of charges, and, lastly, for illumination, both for the purposes of attack or defence, it being a difficult matter to decide in which connection the electric spark fulfills the most important duty.

To begin with the telegraph. All will agree that it is well nigh impossible to overrate the advantages which this rapid means of communication gives to the general, in these days, when the line of battle extends for a dozen miles. Let the commander occupy the most central position, a long time must elapse before his aides-de-camp can communicate with one wing or the other. Assisted by the electric telegraph, however, the general is as close to his subordinates as if he were within shouting distance. Even a brigade of horse artillery or cavalry division advancing at a gallop can carry its telegraph equipment with it, the operators accompanying a

flying column of this nature with but very little difficulty. The wire drums are started off at a gallop, the cable being unwound as the carts proceed, and a sergeant on horseback with a sounder to his ear, in connection with one end of the wire, receives the general's commands as soon, almost, as they are spoken. The movement countermanded or a retreat ordered, the cable is again wound up as readily as it was laid down, and the telegraphers make good their return with the rest of the troops. Where ordinary movements are executed, use is, of course, made of the telegraph wagon, a comfortable little office on wheels, furnished with all things necessary for the receipt and dispatch of messages, but this convenience is naturally out of place where a rapid change of front, or some speedy flank movement has to be executed.

Coming next to the explosion of charges by means of the electric spark, we enter upon a phase of war science which bids fair to grow to infinite proportions. Both Franklin and Priestly suggested the employment of electricity in this connection more than a hundred years ago, but it is very recently indeed that we have been in a position to make proper use of this valuable agent as a means of firing charges at a distance. In fact, at the present moment we have by no means exhausted research in this direction, and we find scientific soldiers and sailors still at variance with one another as to the best plan of using the electric current for firing purposes. One of the first applications made of the subtle fluid was in the removal of the wreck of the Royal George, at Spithead, nearly fifty years ago, when the explosion of the charges was brought about by what is termed a wire fuse, or, in other words a short piece of platinum thread stretched between two copper wires. The platinum bridge having less conducting power than the copper wires, presents a considerable amount of resistance to any current of electricity that passes, and, in doing this, becomes so heated as to be capable of igniting any particles of gunpowder in contact with it. A wire fuse of this description has simply to be placed in the middle of a charge, and if then a current of electricity is passed from a battery along the wire in connection with the fuse instantaneous ignition is the result. This simple method of firing charges under water was a vast improvement over the old one in use by our engineers, which consisted in leading up to a metal pipe from the charge to the surface of the water; the outlet of the pipe was placed as large as possible from the charge beneath the water, and then a ladle full of red-hot shot was emptied down it, and so reached the gunpowder below, which thereupon exploded if the iron fragments had not become too cold in transit.

But for many purposes the wire fuse is ill adapted to the military and naval services.

A voltaic battery is necessary to evolve the low tension electricity required to yield sufficient resistance and heat, and such a battery made up of metal plates, and involving the use of acids, is an awkward apparatus to carry in the field. Already in 1853 this fact seems to have occurred to a Spanish officer, Colonel Verdu, who determined to see what could be done in the way of exploding gunpowder by a spark, or, in other words, by high-tension electricity. Aided by a Ruhmkorff coil he succeeded in firing half a dozen charges simultaneously, and although the discharge was sometimes a matter of considerable uncertainty, to Verdu certainly belongs the credit of having been the first soldier to apply electricity in this way to the firing of one or more mines. Wheatstone and Abel followed in Verdu's footsteps, and while the former directed his attention to the construction of frictional apparatus of a portable nature, which should be suitable for military use, the latter busied himself in the preparation of a fuse inclosing a compound more delicately explosive than gunpowder, a fuse, by the way, which still retains an important place among our warlike stores.

It was in the China war of 1860 that we first find an electric firing apparatus forming part of an army equipment. In this case the outfit was of a somewhat clumsy nature. A conveyance, in shape and size much resembling a baker's barrow, contained a monster horseshoe magnet, and it was the sudden disruption of its armature from this magnet which generated the spark to fire the fuse. A few years afterward this ponderous conveyance gave place to a neat little mahogany box, about a foot cube, which contained half a dozen small but powerful magnets, in the field of which the armatures were made to revolve with exceeding celerity; and it is by means of such an apparatus that to-day we are enabled to fire a score of charges at a time, the wires branching off from the instrument to a distance of 100

yards or more. But, nevertheless, we have yet to devise, it seems, an efficient exploding apparatus capable of igniting both low and high tension electric fuses.

As everybody knows, it is by reason of electricity being employed to fire explosive charges that torpedo warfare has of late attained so important a position. In the Whitehead, or fish torpedo, the electric fluid, it is true, plays no part, but this is the only notable exception. In the floating torpedo, the moored torpedo, and the spar torpedo electricity is the life and soul; at one moment the machine is but a floating buoy or sunken impediment, the next it is transformed into a terrible volcano. A feeble current of electricity flashing along the wire has on the instant sufficed to bring about the fatal change.

Passing from torpedo warfare and the recent attempts that have been made to turn electricity to account in the construction of self-steering launches, we come to a scarcely less important matter, that of firing guns by the electric spark. Not only are guns at proof and those under experiment so ignited, but on board the modern iron-clad it is the custom nowadays to fire broadsides in this wise also. By leading wires from every gun to one point, which is specially adapted for observation, the double vantage is secured of bringing about the firing at the most opportune moment, and of securing a simultaneous discharge. Some experiments made in Germany have proved beyond doubt that an armor plate struck instantaneously in this way by several shot, may be effectively broken up, whereas the ordinary broadside fire, brought about by gunners at word of command, is incapable of doing so. The wires may be led into an observing tower, or half way up the mainmast if need be, and here the firing officer can calmly consort his measures undisturbed by the smoke and noise and bustle going on below him. He is provided with proper sights, and the guns being laid in accordance with his orders he can watch his opportunity for firing as well as if he had his eye to the weapons themselves.

Finally, we have the use of the electric light in warfare. It is the most recent application of all of this wonderful agent, and we should hesitate to say how extensive may hereafter be the employment of electricity in this connection. In the Franco-German war, the first use of this powerful source of illumination was made by the French engineers, and from the forts around Paris the electric rays were made to sweep in all directions to watch for hostile troops engaged in the operation of mining. Bodies of soldiers upward of a mile distant could be plainly seen by the vivid light of the electric lamp, and working parties were frequently compelled to abandon their object in the presence of this powerful detector. As a means of discovering the approach of torpedo launches at night, the electric light will obviously be of value, and already a trial of it has been made in several of the English man-of-war ships. The Alexandra, the flagship of the Mediterranean fleet, is provided with an electric lamp, worked by one of Wilde's powerful machines, so that the efficiency of the apparatus may be practically tested. Experiments, however, have already shown what the electric rays are capable of doing, and a low torpedo launch cannot approach within a thousand yards without detection, while if painted of a neutral gray, so as the better to escape observation by day, the vessel, it appears, is all the more perceptible under electric illumination. Steamers, we are told, are peculiarly liable to be detected by an electric lamp, since the rays are reflected by the steam and smoke as effectively as if the latter were a solid screen. How valuable, too, the electric light on board ship must prove for signaling purposes may be gathered from the fact that the Dungeness light, which was the first one of an electric nature constructed in England, can, it is said, be seen on a clear night at a distance of thirty miles with all the brilliancy of a star of the first magnitude.

THE INVENTOR OF THE MORSE TELEGRAPH.—*Mr. Editor:* I notice in your paper of September 1st a statement of the claim of Mr. Junius L. Clemmons, of Louisville, Ky. Of course, every man is entitled to blow his own horn! What he states is not correct. It is too late in the day to make a stepping-stone of dead men's bones. The honored dead are entitled to all the glory of the telegraph. I enjoyed the confidence of Morse, Page, Smith, and Kendall. The latter two parties have no claim to any honors belonging to the surroundings of the greatest invention (application?) of the age.

Very respectfully L. V. ZANTZINGER,
The First and Original Telegrapher.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

October 15th, 1877.

WASHINGTON NOTES reached us too late for insertion in this issue.

READ A Young Lady's Interesting Reminiscences of a Summer in the Country, on third page. You'll like it.

THE poem "Sometimes," on third page, is from one of Philadelphia's fair daughters. We should be pleased to hear from the young lady again.

NIL DESPERANDUM offers some excellent suggestions in another part of this paper in reference to telegraphers taking an occasional holiday. The article will bear careful perusal.

So far as we can learn, no models pertaining to electricity or telegraphy were destroyed by the late fire in the Patent Office, reported in the last issue of THE OPERATOR.

WESTERN UNION stock closed the day before the annual meeting last week at 84½ asked. The day on which the meeting was held, it closed at 82½ asked. It is now quoted at 83½ asked, and A. & P. at 20½.

INFORMATION has been obtained by the Direct Cable Company that the break in the short section, off Rye Beach, last week, was caused by the schooner Northern Star, which cast anchor over the cable during the recent gale. The anchor caught on the cable, and in the efforts of the Captain to free his vessel, the chain parted. He now demands damages of the company for the loss of his anchor and chain, the total loss amounting to about \$200. The Cable Company, however, has lost about \$20,000 by the careless breaking of its cable, and it is claimed that the damages rightfully belong to it.

AN esteemed lady contributor in this issue, after detailing a number of very interesting events that occurred to her during a sojourn in the country, during the summer, quotes a letter she has just received from a gentleman, who wishes "to renew the pleasant acquaintance begun on the shores of the beautiful Silver Lake," and asks "What answer shall I give him?" We are not quite certain whether this question is intended for us personally, or for the readers of THE OPERATOR in general; but for our part, Helen we would earnestly advise you, if you must answer his letter, to say that you didn't receive his former communication, and do not care to receive any more. Be very particular to give him no encouragement. We would add that we are not so busy evenings as we have been. A note addressed P. O. Box 3,332 New York, will receive prompt and courteous attention. | To the Compositors. Be very careful not to make that word court-cous. An exacting public might imagine that it was intended for a pun.

The Western Union Annual Report.

The annual meeting of the stockholders of the Western Union Telegraph Company was held in this city on Wednesday last, October 10, as already announced in THE OPERATOR. President Orton submitted his report of the operations of the Company, for the fiscal year ending June 30, 1877, from which it appears that the capital stock of the company is \$41,073,410. The bonded debt at the close of the year was \$6,239,038.22. The gross earnings for the year from all sources were \$9,812,352.61; The gross expenses, including rental of leased lines, \$6,672,224.94; net profits, \$3,140,127.67. From this amount there has been disbursed four quarterly dividends of 1½ per cent each, interest on bonds, and sinking fund appropriations, amounting in all to \$2,563,309.93, leaving a net surplus for the year of \$576,817.74. The net profits for 11 years, from July 1, 1866, to June 30, 1877, were \$32,598,336.43.

The report proceeds:

On the 1st day of July, 1876, the Western Union Company operated 73,532 miles of line, 183,832 miles of wire, and 7,072 offices. At the close of the year ended June 30, 1877, there were in operation 76,955 miles of line, 194,323 miles of wire, and 7,500 offices. The increase during the year has been 3,423 miles of line, or 4.6 per cent; 10,491 miles of wire, or 5.7 per cent, and 428 offices, or 6 per cent. There were in use on the lines of the company at the close of the fiscal year, 10,306 sets of instruments for reading by sound, 9 printing instruments, 1,639 recording instruments, 220 repeaters, 183 duplex instruments, 113 quadruplex instruments, 98,558 cups of main battery, and 21,996 cups of local battery. The cost of new instruments and apparatus for the year, amounting to \$91,342.15, has been charged to working expenses. There were expended for repairs of line \$531,068.35, and \$334,379.54 for reconstruction, making a total expenditure for maintenance of line of \$865,447.89; a decrease over the previous year of \$85,178.78.

The number of messages transmitted during the year ended June 30, 1876, was 18,729,567, and for the year ended June 30, 1877, 21,158,941, being an increase of 2,429,374, or 12.9 per cent. This includes press reports sent, reduced to messages on the basis of thirty words to each message. The average tolls upon each message for the year ended June 30, 1876, were 50.9 cents; the average cost of transmission, 33.5 cents, and the average profit per message, 17.4 cents; while for the year ended 30th June last the average tolls were 43.6 cents, average cost 29.8, and average profit 13.8 cents. The decrease in the average tolls during the past year, as compared with the preceding year, 7.3 cents per message, or 14.3 per cent, upon the entire traffic of the company. The average annual decrease of rates during the preceding ten years was 8.3 per cent., which shows that the reduction last year was 6 per cent. more than the average.

The capital stock of the International Ocean Telegraph Company is \$1,500,000, of which the Western Union Company owns \$1,038,500, and the International Ocean Company owns \$461,500.

Since the close of the year an arrangement has been concluded with the Atlantic and Pacific Telegraph Company for pooling the gross receipts of the business of the two companies, and dividing them on the basis of 87½ per cent. of the combined receipts to the Western Union, and 12½ per cent to the Atlantic and Pacific Company. Subsequent to the completion of this arrangement the Western Union Company purchased 72,502 shares of the stock of the Atlantic and Pacific Telegraph Company at \$25 per share, paying therefore 12,500 shares of Western Union stock, and \$912,550 in cash. The outstanding capital of the Atlantic and Pacific Company is \$14,000,000, and is represented by 140,000 shares of the par value of \$100 each. When pending arrangements are fully consummated, a common interest will govern the management of both com-

panies, and it is expected that all the substantial benefits of an actual consolidation will accrue. With the cessation of the wasteful competition which has existed for several years past it will be practicable to arrange a system of tolls throughout the country, which, while more remunerative to the companies, will also be more advantageous to the public, because the reduction will be more widely distributed. We shall also be enabled to reduce expenses very materially by the introduction of many economies through the community of interests thus established between the two companies.

The names of the directors elected will be found in the personal column of this issue. It will be seen that the Vanderbilt interest has still full control of the stock, and Mr. Orton will therefore retain the presidency. The following are the names of the directors who resigned; Messrs. Daniel Torrance, L. P. Morton, John Stuart Milligan, and E. B. Wesley, their places were filled by Messrs. Robert Lenox Kennedy, J. Pierpont Morgan, Cornelius Vanderbilt, Hamilton McK. Twombly, and Samuel A. Munson.

The net profits for the year ending June 30, 1876, were \$3,399,509.97, or \$259,382.30 in excess of the profits of the year ending June 30, 1877. This, however, is to be attributed to the bitter competition existing between the Western Union and its rival, the Atlantic and Pacific, and to the very large and frequent reductions of rates during the year. The report is a satisfactory one, but President Orton does not say anything as to whether the Company ever intends again increasing the salaries of its employees. We are sorry that some action was not taken on this subject. We notice that the New York Central Railroad has increased the salaries of its employees five per cent. Let us hope that the Western Union Company will speedily see its way to taking a step in the same direction.

A Warning to Telegraph Managers.

An ingenious commercial fraud which was perpetrated some months ago upon the Bank of California has become the subject of litigation in the courts. It appears that the manager of the Western Union Telegraph office at Colusa left his office, leaving in charge, in his absence, and without authority from the company, a clerk employed by himself named Charles Crowell. The clerk sent a dispatch to the Bank of California, at San Francisco, purporting to come from a bank in Colusa, the town where the telegraph office was, asking the San Francisco bank to pay \$1,200 to Charles H. Crowley. He then sent another dispatch, addressed to Charles H. Crowley, at a San Francisco hotel, directing him to go to the bank and receive the money. Having thus prepared both credit and identification, in a false name nearly like his own, he shut up the office and went to San Francisco. He found no difficulty in getting a respectable man, who had known him somewhat, to go to the bank and identify him to the cashier. The cashier did not call the man's attention particularly to the name, and as they were so nearly alike, the difference was not observed. The forger accordingly drew the money and disappeared. The bank sued the Western Union Telegraph Company for the amount.

The Supreme Court of California held the Company liable. The court in reviewing the case, says: If it be admitted that it was the duty of Washburn, the operator, to preserve the telegraph machinery at Colusa intact, it must be

manifest that had he so negligently guarded it as that one had gained access to and used it as a means of fraud, the defendant would have been responsible. Of course this must be understood as requiring of him only such reasonable precautionary measures as a prudent man would deem necessary under all the circumstances. Washburn was engaged in his master's business, not his own. It was part of his duty to keep Crowell from using the wires. He failed to discharge this duty, and the principal is equally responsible, whether the placing of Crowell in charge was a "wrongful act committed as a part of the transaction of the business," or was mere negligence.

This case should be a warning to managers of offices. They cannot be too careful as to who is allowed access to their offices and wires, and, of course, should never leave their post of duty even for a day, without the superintendent's sanction. We presume that Mr. Washburn lost his situation on account of his negligence, and we can hardly say that we feel sorry for him. Managers are sometimes in the habit of going off for a day, leaving an incompetent student in charge, and trusting to luck that nothing unusual will happen in their absence. It is a very risky piece of business for the manager himself as well as the Company, and should never be indulged in.

MAIL AGENT HOLMES rushed into THE OPERATOR office, breathless with excitement, one morning last week.

"I've got a **SPLENDID** item," he shouted, placing very enthusiastic emphasis on the word "splendid," while his eyes fairly danced in his head with uncontrollable rapture.

We looked up with a smile of expectancy.

"Ha! ha! ha! It's the best joke I've heard in a long time," and he rubbed his hands together in great glee.

We inquired, a little coldly, what the joke was. "You'll laugh when you hear it, and I'm sure all the boys 'll take a copy of the paper when they know it's in it. Ha! ha! ha! I just thought of it coming down in the elevator, and rushed over with it, while it was hot, so to speak."

We were getting excited to know what this great joke could be, and told him so.

"Well, it's this—he! he!—considering the lamb-and-lion-lying-down-together action on the part of the Western Union and A. & P. the recent lawsuits must have had a very sue-thing effect upon both companies."

Before we could recover from the shock, he rushed for the door, wildly threw it open, and ran madly down stairs. Before reaching the bottom, however, the editorial ink-bottle took him squarely between the shoulders, and he wended his way sadly toward the Western Union building with his back looking as if it were a map of the lines of the Western Union Telegraph Company.

WE beg to draw the attention of General Stager to the case of Manager A. B. Gunn, of Des Moines, and his number one assistant, particulars of which will be found in another part of this paper. Does the Western Union propose to pay Mr. Gunn and his number one assistant salaries for doing its business, and permit them to give all their attention to a swindling telegraph college, while an incompetent student is left to transact the important business of the office, dela-

not only his own but the business of all the other offices on the line, and bring the Company and the telegraph into disrepute generally? Surely not. We take the liberty of asking General Stager to have the matter investigated. If the case is as reported, Mr. Gunn deserves a premium for his faithfulness in the performance of his duty, which we hope he will not fail to receive.

Another Prodigy.

Syracuse has a telegraph operator who sends dispatches with his right hand, and simultaneously dates them with his left.—*Fulton (N. Y.) Times*.

We insert the above startling piece of information for the enlightenment of those of our readers who, perhaps, may not have an opportunity of seeing a copy of the enterprising journal disclosing the important fact. Could this have any connection with the departure of so many of the old timers from the ranks, because they considered it slavery to be compelled to give the work of two hands for the compensation of one? Just think of a human being, and such a useless, brainless large class of human beings as telegraph operators, acquiring the almost incredible feat of simultaneously writing, not only in two distinct languages, but with materials unlike in every particular. The next thing we shall hear of will probably be the transmission of several currents through a single instrument without the aid of a Telephone. We would advise the wonderful prodigy to enter the lecture field, and the energetic editor of the *Times* to take a trip to civilization. Next!

Echoes from 197.

Frank Cox (73 crow) has been transferred to the Cable department.

Fred Rector, who has been ill for several months past, has resumed duty.

Mr. M. M. Downer has been rusticated for a few weeks in New England.

Charlie Miller has returned from Newport, and Mr. L. H. Hallock from Saratoga.

Mr. Chas. Patch, as perfect a gentleman as there is in the service, is temporarily on the day force, having changed off from night service for a month.

Mr. Chas. H. Jennings was the gentleman who had charge of the telegraph office at Creedmoor during the International Rifle Match, not C. F. Jennings, as erroneously printed.

The Easton, Pa., *Express* says: Mr. S. S. Bogart, chief operator of the Western Union Telegraph Co., New York city, stopped in Easton a short time this morning, on his way to Scranton.

Mr. D. Harmon, Jr., has joined the great army of Benedicts. A gentleman in every sense of the word, he deserves all manner of success, and the boys all heartily congratulate him on his new departure.

A record of the number of passengers in the Western Union elevators was kept during the week ending October 6—six days. The water elevator made 700 trips a day during the week—up and down being counted two trips—and carried for the week 5,876 passengers, or an average of 979 daily. The steam elevators, which do not run so fast, made 225 trips each. The one next Broadway carried 8,965 passengers during the week, and the other 8,914, a daily average of 1,494 and 1,485 respectively, making the grand total for the week 23,756.

At the end of the regular concert at Gilmore's Garden last Sunday night, Mr. E. H. Johnson repeated his telephone experiment between there and the Western Union Building, Chestnut Street, Philadelphia. The exhibition was quite satisfactory. Miss Kate B. Taylor, soprano, of the Rev. Mr. Sweet's church choir, Camden, N. J., singing the "Sweet By and By," Mr. William Northcott playing the same as a cornet solo, and Mr. William A. Brisco, tenor of St. Stephen's Church choir, Philadelphia, singing the "Exile's Lament." The instruments were in excellent order, and the transmission of the tunes very distinct.

Sparks.

Pun: Forgery is always done with a steal pen.

A boat race always ends in a row, though we don't see why it oar-ght to.

What a man calls hard luck is frequently looked upon as laziness by his neighbors.

"Can't we make your lover jealous, miss?" "Oh yes sir, I think we can, if we put our heads together."

The man who has more money than he wants is rich; the man who wants more money than he has got is poor.

A writer in the New York *Herald* says the thing that interferes with business is too much money. Just so—too much money that you can't get hold of.

A lady, being about to marry a small man, was told that he was a very bad fellow. "Well," says she, "if he's bad, there's one comfort—there's very little of him."

Jay Gould, it is said, was once a country editor. His downward course since has been rapid. Wonder if he ever gave his readers a (tele) graphic description of a stock operation.

A Cincinnati widow advertised for "every Christian in the city" to send her ten cents. She realized twenty cents, indicating an unexpectedly large number of Christians in that city.

"Gentlemen, I introduce you to my friend, who isn't as stupid as he appears to be." Introduced friend, with vivacity: "That's precisely the difference between my friend and myself."

A small boy to whom the school inspector put the question: "Could you forgive a boy who had insulted or struck you?" pondered awhile and then deliberately replied, "Yes if he was bigger than I am."

When a fond son starts forward in life he sometimes turns round to caress his friends, but a mule never turns round. He is the only affectionate one of his species who can strike out in life both ways at once.

The natives of Fiji have been converted to Christianity, and now we shall have them betting on horse races, and starting savings banks and fleeing to Europe with the funds and indulging in other civilized pursuits.

Scribner & Co., of New York, have just published a book entitled "The Age of Anne." It is so rare that a woman discloses her age, that when she does, it is considered of sufficient importance to make a book of it.

The New York *Herald* says that it is very wrong to call Secretary Robeson an old hulk, and its Norristown namesake remarks that it would be in better taste to call him an old buoy. For our part we consider this newspaper spar-ring very reprehensible.

The fashion journals say, "feathers are still the style for hats and bonnets." "Beds, too," adds the Burlington *Hawkeye*: "We slept on a hotel bed the other night that must have had as much as thirty or forty feathers scattered around on a car load of slats. But this is carrying feather decoration to the extreme of fashion."

When you have just fifteen minutes in which to eat your breakfast and catch the train, how it does soften the tender heart of man toward the gentler sex to see the waiter girl, who went off to get his order, lean up against the side-board and go to sleep, and dream of home and heaven and peace, until the whistle blows.

We all know how apt children are to jump at conclusions in regard to the sound of a word and associate it with others, especially if there is any affinity to the word or idea conveyed. I was hearing George, a bright seven-year-old, recite his geography lesson. In answer to the question, "How are cataracts and waterfalls formed?" he promptly replied: "By pouring water over a Presbyterian."

It was a Frenchman—the famous Carline—who, contentedly laying his head upon a large stone jar for a pillow, replied to one who inquired if it were not rather hard, "Not at all, for I have stuffed it with hay." It was an American lecturer who solemnly said one evening, "Parents you may have children; or, if not, your daughters may have." It was a German orator who, warming with his subject, exclaimed, "There is no man, woman or child in the house who has arrived at the age of fifty years, but what has felt the truth, thundering through their minds for centuries."

A Trans-Atlantic Lecture on Telegraphy.

A new local enterprise called the San Francisco Telegraph Company was formally opened for business in that city on the evening of August 24th. There was a large attendance of directors, shareholders, and members of the press present, and the Secretary, Mr. E. McD. Johnstone, being called upon, delivered the following address:

Gentlemen: We are met to-night for the purpose of opening to the public the San Francisco Telegraph Co., and in connection with the plans and purposes of the Company, permit me to make a few remarks relative to the discovery and progress of telegraphy. The first attempt at transmitting the electric fluid to any distance was made—so the annals of science inform us—in 1827, by one Stephen Grey, a pensioner of the Charter House, London, who made some random experiments which led him to believe that electricity could be transmitted through strings or wires. He used a wire 700 feet in length, suspended it in the air by silk threads, and connected it with an excited glass tube at one end, while another person observed the result at the other. Various attempts were then made to ascertain the distance to which the electric fluid could be transmitted. Scientific men made inquiries into the matter; tried experiments, adding but little, however, that was at all practicable to the mysterious art, and even the celebrated Dr. Franklin, who astonished the world with his discoveries in this science, seems never to have entertained the idea that this wonderful element could be curbed and made the slave of man, as has been demonstrated in our age.

In 1746 the discovery of the Leyden jar was made, which rendered great assistance to electrical experiments. In 1774 a Swiss doctor by the name of Lesage operated on a telegraph comprising 24 insulated metallic wires, each connected with a pith ball electroscope, corresponding to one letter of the alphabet. The result of this experiment seems to have been the date when first the idea of transmitting intelligible sounds was systematized. Then about the beginning of the present century came the discovery of galvanic electricity by Alois Galvani, which was speedily experimented upon and developed by Alex. Volta, and resulted in what is now known as the Voltaic pile. Sir Humphrey Davy then made a series of investigations into the science, and contributed largely to the development of the new era which the discoveries of Galvani had opened up. To all these great men we are largely indebted for their researches and discoveries, but the greatest name among them all is that of Samuel F. B. Morse, of New York, who was undoubtedly the first inventor of the art of writing legible characters at a distance by means of electro-magnetism, which was tested and first put into practical use between Washington and Baltimore in July of 1844. In 1849, five years later, the network of telegraph wires spread over the country, extending over 11,000 miles; and from that date (1844) to this, though there were difficulties to be overcome in rates of tariff, and a want of uniformity in minor details, etc., this greatest triumph of the age has gone on revolutionizing trade and commerce; prying into every corner of the earth, and has "put a girdle round the world" in "less than forty minutes." Truly, the prophetic eye of the aged seer must have swept down the ages even to the present, for he says, "their lines have gone out over all the earth;" and what has not been accomplished by this mighty, mysterious agent?

European nations go to war; we hear of it before the declaration is signed. The hungry bear swoops down upon the sick man, and from under the ocean and over the plain comes the startling news that the insatiable bruin shall gobble up the turkey in less than ninety days, and leave not a rack behind; a short pause, however, changes the outlook, for again the telegraph informs us that the invalid is not so delicate as we had imagined, and if matters continue there will be two sick families in Europe before long instead of one.

From Constantinople, the eye of the Eastern world, to San Francisco, the eye of the Western; from England to Bombay; from Australia to China; from the rivers to the ends of the earth; under the tropic seas; over the snow-crested Alps, and through the deep defiles of the mighty Himalayas, stretches this wonderful electric chain—outspeeding the lightning flash in its swiftness, and bringing into instantaneous communication the tribes of the north, the nations of the East, and the islands of the seas.

But until very lately the mighty advantages of the telegraphic system have been demonstrated only, or

largely, on transcontinental lines. The idea of bringing it into local use has been successfully proven of late, and we have no doubt that the time is not far distant when every city shall have its own lines permeating every nook and corner of every block; when the merchant in his office may converse with his family at home; the housewife may speak with her milliner; the steward may send his orders to market; the shipper may know what vessels are coming and going through the Golden Gate; anxious friends may read from the wires to their homes that the steamer conveying the long expected traveler from Australia or China is sighted off the Farallones; and when you are in immediate connection with your acquaintances in every part of the metropolis, in five minutes after the thought has been conceived or the wish expressed, your friend in a distant part of the city has your message, and can respond through the same medium, and in as short a space of time. The numerous wants of the household, special and ordinary, can be made, and will be responded to with the utmost dispatch. The services of the police, of a physician, or messenger boy, and calls for an express, coupe, and cab, alarms of fire, etc., and all other wants of whatever kind or character that now require trudging down town to accomplish, may be made by simply touching the telegraphic instrument and making known your wishes.

Young people find the study of telegraphy one which combines novelty with utility. It improves the mind; the operator must bring into active exercise all the faculties; it cultivates decision of action, a concentration of thought and effort, as an operator cannot write or read a dispatch and do anything else at the same time. The seeming difficulties in mastering telegraphy can easily be overcome by any student of ordinary ability who will give it time and patient application.

Let us hope that the telegraphic instrument may become as much of a household pet as the sewing machine, and whatever advancement or improvements may be made upon it, let us hope that it may always be run as some of us—newspaper men excepted—love to run our tailor's bill, *on tick!*

Mr. Preece's Lecture on Telegraphy.

Mr. W. H. Preece, who, it will be remembered, has just returned to England after several months spent in examining the telegraphic system of America, delivered a highly interesting lecture at the late meeting of the British Association at Plymouth. He ridiculed the notion that the science of electricity in any way attacked revealed religion, and said he would endeavor to show by what steps the art of telegraphy had been acquired, and what had led to the wonderful improvements which had been made in it during recent years. Electricity was used for nearly all purposes connected with every-day life, and it was valuable as well in time of war as of peace, being a most essential element in torpedo warfare. He could not tell them what electricity was, for the very good reason that he did not know. (A laugh.) They only knew that it was a marvellously subtle force, which could be made to obey their will. Telegraphy, as at present practiced, was simply the art of instantaneously conveying to distant places the first elements of written language. In transmitting the letters of the alphabet, either visual or acoustic means could be employed. Most of the telegraphs in Great Britain appealed to the eye; in America nearly all appealed to the ear. The sending of messages from place to place was dependent upon mere transitory signals, which in many cases, were similar to each other; and it was not surprising, therefore, that errors occasionally occurred. In one instance the message "Arrived all right," despatched by some ladies, was delivered "Arrived all tight." (Laughter.) In another case a husband had gone to the seaside to engage apartments telegraphed "All right; come to-morrow." He was astounded that his wife did not come to him, but the mystery was explained when it was discovered that "All right; home to-morrow," had been the message actually delivered. (Laughter.) A prominent politician, a member of the then Cabinet, who on one occasion addressed an assemblage in a neighboring county on the education of children was astonished to find in the *Times* report the following morning a constant repetition of the vulgarism "kids." (Laughter.) The explanation was discovered to be that the clerk, finding the word "children" occurring in every sentence, substituted the word "kids" in order to save time, trusting to the people at the other end to make the necessary translation.

(Laughter.) A merchant away from home received a telegram announcing that his wife had been safely delivered of a little girl. Simultaneously a message came from his partner stating that a draft had been presented to the firm with a doubtful signature, and inquiring if he knew anything about it. He at once replied to both messages, but somehow misdirected them. The amazement of the wife might be conceived when she was informed, "I know (nothing) about it; it's a swindle," (loud laughter), and of the partner when he received hearty congratulations upon his safe deliverance. (Renewed laughter.) These were the follies of telegraphy, but they were the exceptions which proved the rule, the rule being marvellous accuracy, considering that the number of words which passed through the Central Office in London, the week previous, was equivalent to 102,712 messages. The advance in England had been in the direction of automatic telegraphy; in America it had been in duplex, triplex, and quadruplex telegraphy—and lastly the telephone. (Cheers.) In England the comparative slowness of hand manipulation had been overcome by the invention of the punching machine. The Americans had also acquired a system of automatic telegraphy which was even faster than our own. It was possible, however, to go too fast—possible to send more messages than could be conveniently received at the other end. Recently, between New York and Chicago—one of the quadruplex circuits—182 messages were transmitted in an hour. The American message was shorter than the English, and those 182 messages would be equivalent to about 130 English messages. Now, as by the English automatic as many as 160 messages were frequently sent per hour, the relative capacity of the two systems was 130 for America to 160 for England. (Cheers.) The latest improvement in telegraphy was the telephone. Although he had spent a quarter of a century in the establishment of the system in this country, not a single day passed without his feeling absolute surprise and wonderment at the mysterious force he had to handle. It had obliterated out of the English language the word "impossible." If anybody had told him twelve months ago that it would be possible to speak between Plymouth and Exeter, he would have laughed them to scorn. Now, he only knew that it had been done—(applause)—and he would not be astonished if on some future day it became practicable to hold converse across the Atlantic Ocean. (Loud cheers.)

Respectfully Referred to Supt. Anson Stager.

TELEGRAPH SCHOOL.—In connection with McClain's Business College, corner Sixth and Market. Wires all over city. Best chance ever offered. A. B. Gunn, manager Western Union, in charge with a number one assistant. Night class for those employed in day time. Apply as above, at Exposition building, or W. U. telegraph office.

EDITOR OPERATOR.—*Dear Sir:* As long as you are "doing" plug factories please give the inclosed notice, taken from the Des Moines, Iowa, *Register*, the benefit of your circulation. For the last month I have been compelled to work almost entirely with a student at that office, without understanding why till I saw the inclosed in last week's *Register*. The manager has time to be out taking charge of a telegraph institute while students do his work. It is provoking, to say the least. I have no objection to working with students when the case demands it, but I do not think it right that my business should be delayed as it is with that office when there are plenty of competent operators there if they would attend to business. As I work direct with Des Moines should not prefer to have my name mentioned. Respectfully, MANAGER.

[An English Opinion of Lightning Flashes.

Our American cousins are again to the fore with one of the first telegraphic books of fiction—"warranted founded on fact"—of the age. "Lightning Flashes and Electric Dashes," as put forward by the energetic and talented editor of the American OPERATOR, is fairly entitled to be styled *unique*, and reflects great credit upon all concerned in its production. Everything in the work is thoroughly telegraphic and highly amusing, the cartoons are cleverly executed, the narratives pithily and in parts brilliantly worded, while the variety supplied will make it difficult for any who may have the privilege of reading the book to do so without enjoyment. We heartily recommend the work to our brother telegraphists.—*London Telegraphist*.

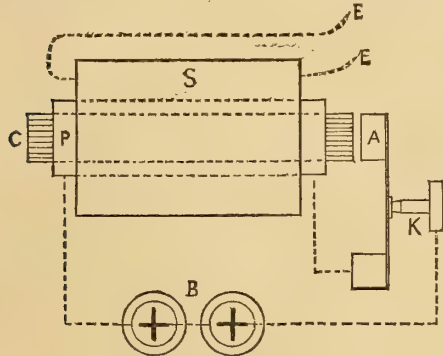
Scientific Department.

[This department is under the charge of Mr. H. Van Hovenbergh, 145 Broadway, to whom all communications relating thereto should be addressed. Mr. Van Hovenbergh will cheerfully answer here any queries pertaining to electricity, magnetism, or kindred subjects.]

INDUCTION.

II.

Currents of electricity produced by induction are capable of other uses than that of mere experiment. The most important of these is, perhaps, their use in relieving and curing certain diseases of the muscles, such as rheumatism, paralysis, etc. The apparatus used for the production of electricity for this purpose is very simple, and well adapted to the end desired. The illustration shows one of the most efficient.



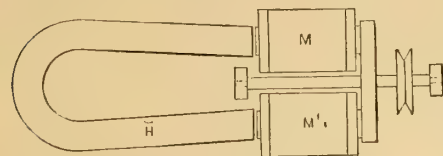
C is a core, made of twenty-five or thirty pieces of iron wire, laid together lengthwise. P is the primary coil, of coarse, covered copper wire, wound around the core. S is known as the secondary coil, and is composed of a great number of turns of very fine copper wire, usually about No. 36. It is completely insulated from the primary coil, and may be regarded as an entirely separate portion of the apparatus, as the effects obtained are due only to its proximity to the primary coil. In some instruments it is made removable, so that, by sliding it partially off the primary coil, the strength of the inductive current may be increased or diminished at will. A K is the key, or vibrator, used to break and close the circuit of the battery B.

When the apparatus is properly connected up, the battery circuit traversing the primary coil, P, magnetizes the core, C. The armature A is then attracted, and opens the circuit at the platinum points, K. This demagnetizes the core, and the armature again falls back. A continuous and regular vibration is thus produced.

Each time that the core is magnetized an impulse of electricity is induced in the fine wire coil, followed, as the core loses its magnetism, by another impulse nearly as strong, but of a reverse direction. The inductive currents are obtained from the terminal wires E, E.

This is the particular device for which the celebrated Page patent was obtained. The absurdity of the attempt, made a few years ago, of stretching it so as to cover Morse telegraphy, is very apparent.

Another method of producing inductive currents is shown in this drawing:

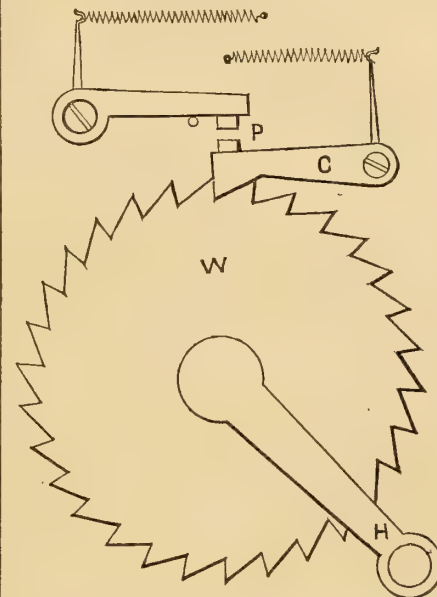


An electro-magnet, M, M', is so pivoted before the poles of a strong horse-shoe magnet, that it may be rapidly revolved by means of a cord and pulley. A spring (not shown) is added for the purpose of cutting off each alternate impulse, and preventing a loss of a portion of the effects. Every time that the soft iron cores approach the poles of the horse-shoe magnet, an inductive current is produced in the fine wire surrounding the cores, followed, according to the invariable law, by a current in the opposite direction, as they separate. This current is induced by the magnetization of the iron cores, caused by the proximity of the horse-shoe magnet.

This is the cheapest and commonest form of "shocking" machine.

The principles involved are precisely the same as

those governing the operation of Prof. Bell's telephone, which will be the subject of the next article.

ELECTRO MECHANICAL MOVEMENTS.
No 8.

A break-wheel, or transmitter, used for breaking and closing the circuit of a dial or printing telegraph. As the ratchet wheel W is turned by the handle H, the click C is pressed outward, and the circuit closed at the platinum points P. Should the wheel make a complete revolution, the circuit will be opened and closed as many times as there are teeth upon it. This movement can be used in connection with Nos. 1 or 3.

Do Telegraphers Have Sufficient Holidays?

Perhaps of all occupations that of the telegraph operator is the most arduous. The strain upon him mentally is heavy, and something more is needed to meet it than the ordinary occasions of rest. The mere fact that a man is tied to the oar, that day after day, through the long year, he must without fail be at his post, is sufficient of itself, without any severe mental labor, to depress and exhaust. The human spring, when it is always wound, loses its elasticity. The mind has its muscles and nerves as well as the body, and these invisible fibers, when they are constantly kept in tension, suffer.

This is what is expressed in our colloquial adage, that all work and no play makes Jack a dull boy. Jack suffers both in body and mind when he has no relaxation either for the one or the other. A break in our duties, therefore, is mentally and physically a healthful thing; it gives a fillip to the mind, recruits the bodily energies, and sends back the jaded artisan to his work with fresh vigor and fresh heart. But there are moral benefits which we must not by any means lose sight of. A monotonous life is not morally any more than physically a healthful one.

A perpetual sameness of experience exerts an enfeebling and withering influence, and this holds true whether we take the monotony of indolence or of unvarying work. If a plant were always blown on by the same wind, or always beat upon by the same glaring sunlight, it would not grow to its full natural height nor show a healthy leaf or stem, and so the man whose circumstances never vary is apt to be morally blanched and weakened.

The lack of change creates a desire for excitement, and unless met by such a healthful stimulus as a few days' holiday naturally supplies, that stimulus may be sought for in forms of excitement which are neither seemly nor safe. The monotony of unwearying and continuous work is a recognized feeder of intemperance, but it is counteracted by such pleasurable relaxation as a few days' absence from duty affords.

We therefore think that our telegraphers, as a rule, do not take as many holidays as they might—in view of the ease with which substitutes might be secured—that with great advantage to them-

selves. The few days which our city telegraphers might easily, at regular or irregular intervals arrange to spend in the country, would send them back to their desks with new impressions and elevating emotions.

The recollections of their childhood, and the memories of those hopes and ambitions which are, thank heaven, as inseparable from childhood as destiny itself, and which may, by the turmoil and excitement of city life, have been almost obliterated, will be revived and fanned into brightness, and on his return to the city those temptations which are so inseparable from a city life, and which previously were so irresistible, will have lost their fascinations and be looked upon only with contempt.

I am sensible of having touched upon this subject very superficially, but considerations as to space compel me to reluctantly dismiss it for the present.

NIL DESPERANDUM.

The New York Wire Club.

There are deeds which should not pass away,
And names that must not wither.

When Fred Baldwin rapped for order, he was greeted with a hoarse cheer. The club was honored, he said, with the presence of a distinguished visitor this evening. He referred to the recently-appointed Superintendent of the Law Telegraph Co. (cheers). To use the words of President Hayes, "There is a front and rear rank in all armies." Need he tell the gentlemen present which rank Mr. Weller occupied in the great telegraphic army (applause).

Morris Brick remarked that in Sherman's army the foragers were known as "Bummers" (loud cheers).

When Mr. Weller arose to address the meeting, an indescribable scene followed, many members threw their hats in the air, while others drummed on the table with their canes. Sergeant-at-Arms Moffatt lost his temper, and calling Ed Welsh sharply to order, threatened to eject him. Mr. Welsh doubted Mr. Moffatt's ability to put him out, and eyed him in an ominous manner. With difficulty the chair restored order.

"I thank the Western Union boys," Mr. Weller said, "for this magnificent ovation. The secret of my success is, that I avoided the Jacob's ladder of promotion, and studied for superintendent direct (applause). Of course my elevation created jealousy among the old men, but that could not be avoided."

Tom Allen thought that Mr. Weller's remarks did injustice to the old men. The selection of that gentleman to take charge of the Law Telegraph Wire, in his opinion, was eminently judicious, as he was fully competent to stand a large amount of hard rest (applause).

While Jerry Borst coincided with the sentiments of the last speaker, he remarked that, "As an old man, Mr. Allen is a mere boy compared to me," (applause).

Gus Coleman: "The presence of so many representative telegraphers this evening is very gratifying. I am, however, disappointed at Mr. Sheldon's absence. An hour or two ago I left that gentleman receiving from a very lively sender on the 2d Chicago quad. Every time Mr. Sheldon broke, he wiped the perspiration from his brow with a red handkerchief, and exclaimed 'My goodness!'" (laughter).

Denis Brown: "I will relate a little joke for the entertainment of our guest. A few evenings ago the operator at 'Fa' office, Hartford, told me that he was about being transferred to the New York night force. He inquired if there would be any difficulty in getting off duty a night now and then. I assured him that there would not be the slightest. A failure to check off a cable number would give him a night off at any time," (laughter).

Mr. Weller here expressed a desire to hear some of the singing for which the Wire Club was so justly noted, whereupon the regular quartette, Jerry Borst, Ed Gibbons, Gilly Olmstead, and Denis Brown arose, and rendered "The Sweet By-and-By."

Denny Harmon expressed the opinion that no team from England could surpass that singing, and moved an adjournment, which was carried. The occasion was exceedingly pleasant.

The electric light is becoming useful to the Russian Government for military purposes. They have been experimenting with the object of increasing the distance to which the light produced by electricity may be thrown. Objects have been made visible at the distance of upward 3,000 yards.

Dashes Here and There.

"Well posted"—The telegraph.

An electrical apparatus has been invented which will indicate an overstrain or weakness in a bridge, roof, or other structure.

The Washington-New York Motor Circuit, which has been worked single all summer, will be worked duplex regularly during the session.

A lightning rod agent recently swam to the middle of a stream, where a farmer was washing sheep, in order to explain to him the merits of his goods.

"Every cloud has a silver lining," and many a poor, overworked operator nowadays wishes that his phrethoric pocketbook were a good sized, healthy cloud.

The Troy *Budget*, speaking of THE OPERATOR, calls it "the leading telegraphic journal." A subscriber in that city sends us the paper with the remark in blue pencil on the margin, "keyrect."

When Miss Johnson took laudanum at Lima, Ohio, the Pittsburg *Commercial Gazette's* telegraph editor headed the news "Seeking Succor of Sor-row. A Blonde Beauty Attempts to Hurriedly Pass Behind the Veil of Futurity."

The short section of the Direct United States Cable Company's line between New Hampshire and Nova Scotia is interrupted. This does not however, affect the due transmissions of telegrams to Europe, which are now forwarded to Nova Scotia by the land lines.

Consequent upon the "pooling" arrangement between the W. U. and A. & P., quite a number of the branch offices in Washington have been closed, including the Arlington Hotel, Ebbitt House, Riggs House, A. & P. office on Fifteenth street, etc. A new office has been opened at the Navy Department, with Miss Thompson in charge.

THE BEST FORM OF ELECTRO-MAGNET.—M. Du Moncel has recently conducted investigations in order to determine the relative diameters of the iron core, and of the magnetizing coil, for producing the best results. He has concluded, first by calculation and afterward by direct experiment, that the thickness of the coil should be precisely equal to the diameter of the core. This is a valuable point, and one which electro-magnet makers will doubtless at once turn to profit.

Redwood, Cal. *Times and Gazette* says: One of our neighboring towns has ciphered the candidate treat dodge to a very fine point. A telegraph wire is connected with recording instruments in the various bars, and when a candidate enters a particular saloon the other drinking places are instantly signalled, and pour forth their inmates to swell the patriotic total. There is no telling how much a man will not do for the public good in the alcoholic line.

FEELING PULSE BY TELEGRAPH.—Some months ago Dr. Upham, of Salem, Mass., in order to explain to his audience the variations of the pulse in certain diseases, caused the lecture room to be placed in telegraphic communication with the city hospital of Boston, distant fifteen miles, and by means of special apparatus the various pulse beats were exhibited by a vibrating ray of magnesium light upon the wall. These experiments have lately been repeated at Paris with success.

A San Francisco newspaper has accomplished a remarkable feat in telegraphy. The morning after the international rifle shooting at Creedmoor it came out with a broadside of diagrams of the targets, bearing accurate representations of the scores, as proved by the New York papers received a week afterward. These diagrams had been transmitted over the wires by a new process, invented and patented by one of the proprietors of the journal, and not yet generally understood, but which may contain the germ of great things.

The telegraph-pole nuisance is in process of abolition in the United Kingdom. According to the Postmaster-General's annual report just issued there were only 2,000 miles of underground wire in existence in Great Britain at the time of the transfer of the telegraphs to the Post-Office, while on the 31st of March last there were more than 8,000 miles. The appearance of the streets of London is already noticeably improved by the change, to say nothing of the decreased danger to life and property in the neighborhoods where the aerial wires have been placed underground, and the lesser liability to telegraphic interruption when the frosts and snows of winter set in.

In his testimony before a committee of Aldermen in this city, two weeks ago, "Ex-Boss" Tweed was asked why the telegram signed Samuel J. Tilden, was sent to the country districts in 1868, asking that the probable result of the election in those districts be telegraphed to New York at the close of the polls and before the vote had been counted. "To keep the telegraph lines busy," was the reply, "so that the interior of the State should not know what we had done here and make their returns so as to beat us. We thought to fill the wires and prevent them sending out instructions from here as to what votes were wanted. One proposition was to telegraph the whole Bible, or as much of it as might be required to hold the wires until we wanted to use them."

A TELEGRAPHIC BLUNDER.—The other evening as "Graphy" was sitting in the office of the Western Union, reading, for the twelfth time, a letter from his girl, the Associated Press reporter came in and handed him a dispatch. "Graphy," in a fit of absent-mindedness put the dispatch in his pocket, headed his girl's letter "Associated Press," and sent it up stairs to the operators. What was the surprise of the S. F. *Call* editor, on receiving the following:

MY OWN DARLING—Meet me at the Sunday School picnic to-morrow at Treadway's, where we will recline on the lovely grass, 'neath the shade of some spreading oak, and eat ice cream as we while the happy hours away. It's all sunshine when you are near. Yours truly, ALICE.

The next morning the reporter received a dispatch from Mr. Pickering, warning him to abstain from liquor if he wished to retain his situation.—*Virginia (Nevada) Chronicle.*

PERSONALS.

Mr. John M. Leitch, of the Western Union office, Glen Cove, L. I., paid a visit to city the last week.

Miss Marion Carpenter has been transferred from St. Joseph, Mo., to Marshall, Texas, Western Union office.

Lottie, the proficient little operator at the A. & P. office at West Albany, N. Y., has retired to engage in "domestic duties."

Mr. A. D. Ayers, of Palisade, Nev., has been appointed manager of the W. U. office at Tuscarora, same State. His successor is Mr. John Bunce, late of Lake Tahoe.

Mrs. E. A. Hunter, manager of the Western Union Tel. office at Danbury, Conn., was in town last week. Mrs. Hunter takes great pride in having the receipts of her office as large as possible, and as business has recently been greatly on the increase in Danbury, she feels correspondingly happy.

Larcombe, of the Washington A. & P., who accepted a situation on the Military Line at Santa Fe, N. M., a few weeks ago, has been relieved, and Mr. A. K. Sinnott, of the Washington Western Union office, has taken his place. Sinnott left for Santa Fe last week. The best wishes of the boys follow him.

Mr. G. W. Stauter, night operator Wabash Railroad, Waverly, Ind., was run over at that place October 2d, and severely injured. In attempting to board a freight train while in motion he missed his footing and fell under the train, severing his right leg from his body. At last accounts he was in a very critical condition.

The stockholders of the Western Union Telegraph Co. held their annual election October 10, President William Orton in the chair, when the following directors were elected without opposition: William Orton, William H. Vanderbilt, Edward D. Morgan, Robert Lenox Kennedy, Moses Taylor, Augustus Schell, Wilson G. Hunt, J. Pierrepont Morgan, Frank Work, Harrison Durkee, Cornelius Vanderbilt, James H. Banker, Chester W. Chapin, Alonzo B. Cornell, Hamilton McK. Twombly, George M. Pullman, Norvin Green, William K. Thorn, John R. Duff, Cambridge Livingston, Darius O. Mills, Oliver H. Palmer, Edwards S. Sanford, Samuel A. Munson, David Jones, Joseph Harker, Anson Stager, Samuel F. Barger, Edwin D. Worcester.

KANSAS CITY, MO., NOTES.—The operating department of the Western Union Company in this city has recently been removed from the third story of the handsome building it occupies. The business quarters are on the first floor. Here are

the receiving and delivery departments, manager's office and clerical and C. N. D. departments. The battery department, under the supervision of Andrew Johnson, is on the second floor. There are 2,500 cups ranged along the shelves in museum style. The third floor is splendidly fitted up, and there are ten quartette tables, forty sets of instruments, and two quadruplexes. Over one thousand messages are handled daily, and business is rapidly increasing. This may be attributed to the fact that Kansas City is at this time "flourishing like a green bay tree!" Mark Crain, formerly chief operator and president of the Telegraphers' Plug Association, resigned recently, and went to St. Louis. Mr. William H. Woodring is his successor. The operating and receiving departments are connected by a pneumatic tube. There are five branch offices in Kansas City, all doing a good business. The A. and P. wires were recently run into the W. U. main office. Seven years ago three persons "ran the machine here. To-day there are twenty-three."

M. M. F.

ALBANY, N. Y., ITEMS. The Bell Telephone recently introduced in Albany by Manager Sewall of the A. and P., is now being quite successfully used by the Police Department. The Albany Water Works Company, and the Albany Gas Light Company, the W. U. and the A. and P. offices in the lumber district have been consolidated. Mr. Richard Joyce of the W. U. returning to the clerical force of the main office, and Miss Ella Grant of the A. and P. remaining in charge. An office was kept open in Tweddle Hall under the personal supervision of Manager Rugg of the W. U., during the Democratic State Convention. Three wires were kept quite warm. The memorandum books have been introduced in the Western Union main office same as in New York, and now each man is required to keep a record of the proceedings on his wire.

The following dialogue took place a few mornings since between the assistant chief of the W. U. and a city office.

A. C.—How do you cut out on your switch? you open the wires every time.

City Office.—Why, I pull the stops all out.

A. C.—Well, you better stop that. Curtain falls. 6527 Chigan Ave. for 652 Michigan Ave., and bemer come for better come, are good. X.Y.Z.

DETROIT PERSONALS.—Mr. J. G. Hall, formerly mgr. of the Western Union, Jackson, Mich., office, but who, for the past four months, has been working the Chicago quad in the Detroit main office, has been appointed manager of the East Saginaw, Mich., office, *vice* A. Ferguson removed. Mr. Ferguson has been manager at East Saginaw for sixteen years. Mr. R. E. Cuppage, of the Buffalo quad, nights, ably fills the vacant chair on the Chicago quad, days. Mr. J. H. Largay, formerly of the cable department, N. Y., has accepted the position on the night force made vacant by Mr. Cuppage's transfer to the day force. Mr. B. D. Klyn, of the Chicago quad, nights, has resigned and accepted a position on the A. & P. night force here. Mr. A. P. Danforth, of A. & P. office, Detroit, takes Mr. D. Klyn's place on the Chicago quad nights. The Western Union, A. & P., and Board of Trade Tel. Co. offices, at the Board of Trade in this city, have been consolidated, and what has hitherto been three offices is now in one, under the control of the Board of Trade Tel. Co., with F. A. Forbes as Manager. The Gold and Stock Tel. Co. have recently put in operation here ten of their stock and market instruments, which are giving good satisfaction. Mr. F. S. Hogan, report operator at Bay City, Mich., has resigned, so as to give all his time and attention to the grocery business, in which he has lately engaged.

BIRTHS.

Sunday, Aug. 27, to James B. Coulter, of the W. U. Tel. Co., Oil City, Pa., office, a son. First edition.

To John Williams, P. R. R., operator Jamesburg, N. J., a fine daughter.

MARRIAGES.

NEWCOMER—SPEESE.—Sept. 4, Mr. A. H. Newcomer, manager W. U. Tel. Co., Lock Haven, Pa., to Miss Mamie Speese, of Shippensburg, Pa.

DEATHS.

Sept. 23, at Newport Station, Nova Scotia, James W. Sweet, station agent and operator, aged 22 years.

All Persons sending for
Catalogues or ordering articles advertised in our column
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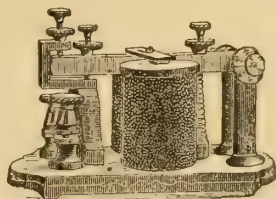
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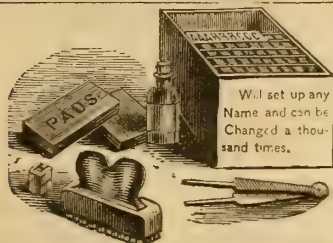
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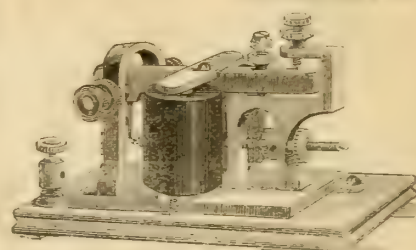
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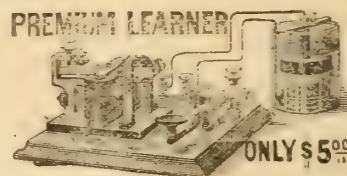
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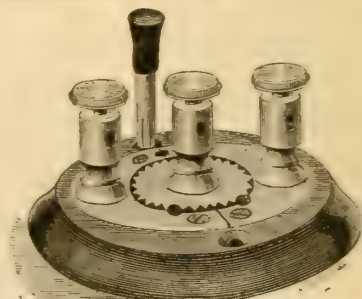
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"Mother is dying, come at once!"
And the tears will almost start
For tender daughters and loving sons.
God pity each aching heart!
Ah! how the haunting memories press
Back to the mind once more,
Of the mother's unflinching tenderness,
That is now forever o'er.

"I am well; will be home to-night."
How some bright eyes will glow
All day long, with a happy light,
As they watch the moments go!
"Have had no letters; is something wrong?"
Some heart is sad to-day,
Counting the hours that seem so long
For the sake of one away.

"Arthur Ross by accident killed;
Tell his mother! Am coming home."
Alas! for the home with such sorrow filled,
When the bitter tidings come.
"Alice is better, gaining fast."
And hearts that have been bowed
Under their weight of fear, at last
Shall lose their weary load.

So, over the wires the tidings speed,
Bitter, and grave, and gay;
Some hearts shall beat and some shall bleed
For the tale they have to say.
As I sit all day by my desk alone,
I hear the stream go by,
And catch the wires' changeable tone
With a smile and then a sigh.

GENEVIEVE H. COWLES.

Wooing by Wire.

[BY MISS J. J. SCHOFIELD.]

"I don't see how any one can write such nonsense, and then get credit for being clever, and understanding human nature?" exclaimed Miss Sunnidle, shutting the book she had been reading with a protesting bang. "I don't believe one word of it! Do you, Dick?"

The question was addressed to her pet canary, and he answered with his usual accommodating chirp, which might be interpreted to mean yes or no, according to the questioner's wishes.

It was Vanity Fair she had been reading, and this is the passage which provoked her indignant exclamation: "Old or ugly, it is all the same, and this I state as a positive truth: A woman with fair opportunities, and without an absolute lump, may marry whom she likes."

Now, poor little Miss Sunnidle had reason to doubt this comforting assertion. She had not the shadow of a lump, and if it had been possible for her to marry whom she liked, she would not have been thirty years old and still a spinster. Her idea of Paradise was to have a little home of her own, no matter how humble, with a dear, good husband to love and live for. Long and patiently had she waited for the lord of her life to appear, but still he came not. Love, with all its gladness and grief, with all its sweet tumult and pain, was to her but a beautiful myth—a fairy tale; but none the less did she dream of it, and long for it; for her poor, innocent little heart was as romantic as that of any young school miss. Poor, lonely, little old maid! No wonder, then, that she differed from Thackeray in his estimate of woman's power to marry whom she liked.

She did not believe in the modern "Woman's Rights" movement, and although she had been earning her own living, bravely and uncomplainingly, for nearly twelve years, it was not from any desire to be independent that she did so, but simply because she had no one to earn it for her. None of her near relatives were living, and, though naturally of a cheerful and sociable disposition, she had always been very much alone in the world. Most of her life had been spent at school-teaching in a country town, and wearisome enough she found it, trying to train the minds of her rustic pupils. Anxious for a change, she determined to learn telegraphy, and for this purpose made arrangements with the operator, Mr. Wylie, to instruct her in the mysteries of the art, and let her practice in his office after school hours. She had been practicing most perseveringly for over two years, and was now a pretty fair sound operator, but, unfortunately, could not get a situation. After sending in about half a dozen applications, which always met with the same discouraging reply, "No vacancies at present," she began to despair of ever getting an office, and tried to settle down contentedly to school teaching. But she had no taste for it, and found it irksome. With telegraphy it was different. She felt sure she could succeed at that, for her heart was in it. To her there was an interest—a fascination about it. It was so much pleasanter than going over, day after day, and year after year, the same dull lessons, with duller children. It was the height of her ambition to be put in charge of a nice little office of her own. But she did not expect to get it, for, as she sometimes plaintively declared, Dame Fortune seemed to have a grudge against her, and never would let her have anything she set her heart upon.

However, the fickle goddess at length decided to make a little variety in the programme of Miss Sunnidle's life, by granting her wishes.

The day after that on which this veracious narrative opens, she went down to the office, and told the operator she had decided not to waste any more time practicing, as there seemed to be no hope of getting a situation.

"Well," said he, "I was just going to advise you to apply for this office. I am about to give it up and go back to farming, and will ask the superintendent to let you take my place, if you wish."

Of course she did wish, and he wrote without delay. In a few days the answer came back, authorizing him to transfer the books, etc., to her. She soon found a substitute to take her place at school, and in less than a fortnight was in formal possession of the office.

There were not so many lady operators in those days as there are now, and when it was flashed down the line that a lady had charge of "Sg" office, there was quite a little excitement in most of the other offices over it. Some of the operators signified their approval of it, in telegraph vernacular, by voting it "immense;" others, less gallant, felt that the presence of a lady on the line would be a restraint upon their freedom of (telegraphic) speech, and they would no longer be able to vent their wrath on offending brother artists in their accustomed style, which was often more forcible than elegant.

Tom Gordon was manager of the next office on that line, and when he heard of the appointment he scarcely knew whether to be pleased at the novel idea of having a lady to work with, or to resent the innovation of a woman presuming to engage in what he considered man's work. After due consideration he came to the conclusion that it would not be likely to affect the fact to any great extent whether he resented it or not, so he philosophically resigned himself to fate, determined to make the best of it.

That evening, when Phil Burke, operator on the opposition line, dropped in, as his custom was, to compare accounts, and tell about the wonderful amount of business "our Co." did, Tom cut him short by complacently observing:

"Oh, we know all about that, but we're one ahead of you yet, old man! We can boast of a young lady operator on our line!"

"You don't say so!" exclaimed Phil, with an incredulous air.

"Fact, sir!" said Tom, laconically.

"Is she good looking?" inquired Phil, deeply interested.

"Guess so—she sends well."

"What in the wide world has her sending to do with her looks?" quoth Phil, impatiently.

"Well, perhaps not a great deal, but as I haven't seen her yet it's all I have to judge by. It's one great point in her favor, at all events, for it would

set me crazy to listen to her if she handled the key in the nervous, jerky style some girls do."

"She seems to have made a pretty good impression on your tender young heart," remarked Phil, mockingly. "Take my advice, old fellow—be careful you don't get caught. I was reading in a paper, the other day, of a fellow who fell in love with a 'sister operator' whom he had never seen, and only became acquainted with by talking to over the wire. He rashly proposed, she as rashly accepted, and they saw each other for the first time upon the wedding day. Rather risky business, I should think!"

"Well, of course, matrimony is a risky speculation any way, but my opinion is that he stood as good a chance of getting a wife that would suit him under these circumstances as any other. You can form quite as good an estimate of a girl's character and temper by working and talking with her over the line, as by being personally acquainted with her; better, perhaps, for you take her on her merits alone, and are not prejudiced by her appearance. Now, it is a well known fact that a pretty girl's beauty blinds us to her intellectual deficiencies and faults of temper, while, on the other hand, we are too apt to do homely women injustice by taking it for granted that their characters are as unattractive as their faces. I have a theory of my own—"

"Oh, bother your theories!" broke in Phil, irreverently. "You are the prosiest old preacher I ever knew. Every time a fellow asks you a simple question you trot out a perfect legion of facts, fancies, and theories, mixed up promiscuously, in a way that is fearful to contemplate. Better cut the matter short, and put your theory into practice, by persuading the fair unknown to change her name to Mrs. Tom Gordon."

"I might think seriously of doing so," answered Tom, with imperturbable good nature, "only the trouble is, the cash valuation the company puts on my services is barely enough to keep me in cigars, much less enable me to indulge in the luxury of a wife."

"Economize, my boy, economize! You might have been a wealthy man by this time if you had not indulged in so many extravagant habits."

Which, indeed, was partly true, for Tom's salary was good enough, if only he had not been so careless about money matters. Handsome, generous, pleasure-loving, and with no one but himself to think of, he never took the trouble to save, having, as he said, no object for so doing. This "having no object" had been the great drawback to Tom's success in life all along. He was clever enough to have made his way in the world, if he could only have been brought to feel that it was worth while trying. But he allowed himself to drift along, carelessly, aimlessly, making little use of the splendid talents nature had given him. The ability was there, but the stimulant was lacking. In short, he was a man who needed to have a good, loving wife dependent on him, in order to develop the noblest part of his nature, and keep him from degenerating into a selfish, lazy "good-for-nothing."

Little Miss Sunnidle has been in possession of her office about a week, and already the place wears a tidier and more cheerful aspect than it used to under the old masculine regime. It isn't much of an office, to be sure—only a wee corner of a book store, partitioned off, but it is pleasant and cosy. On the floor is a bit of pretty, fresh-looking carpet. The ugly, ink-stained counter, and the equally ugly desk on which the instruments stand, are neatly covered with green baize. At the window stands a mammoth geranium, perfectly gorgeous in its array of scarlet blossoms. Dick's cage hangs beside it, and Dick's sweet voice answers cheerily back to the monotonous click, click of the sounder.

There has not been much doing all day, and the busy little woman, who cannot bear to sit idle, is wishing, for the fiftieth time, that somebody would come in with a message to send, or that one of the other offices would call her up to receive one. Her wish seems likely to be granted, for presently she hears the instrument tick off her office call, "Sg, Sg." Thinking some one had a message for her, she made haste to answer, but instead of a message comes the rather abrupt inquiry:

"What is your name, please?"

With her usual simple frankness, she answers, "Mildred Sunnidle."

"Odd name, but pretty," remarks her unknown querist. "How do you like your new office?"

"Oh, very much, now that it is cleaned up, and re-furnished, and is no longer redolent of cigars," she replies. "What office are you in?"

"In 'Cn' office," is the answer. "My name is Tom Gordon."

two or three weeks, and tell her all about the quadruplex and the telephone, and Eitemiller and Schermerhorn, and the circulation of THE OPERATOR, and such like, so, simply arming myself with an order from the Lord Chamberlain, and traveling entirely incog., I visited the State Apartments, Round Tower, etc., and then quietly folded my tent, and silently stole away back to London.

There are many very magnificent pictures and other works of art in the State Apartment. The painting on the ceilings is the work of the well known artist, Verrio. The carpets, furniture, and general appointments of the rooms are, of course, exceedingly rich, while the view from several of the windows is perfectly fairy-like. There is also a most delightful view from the top of the Round Tower. Beside Windsor itself, the Thames, Windsor Great Park, etc., twelve counties are within the range of vision. But Oh, my! what a walk it is to reach the top, though. The steps are most uncompromisingly hard, and I should imagine there must be at least several thousand of them. They told me the tower was only 148 feet high from the quadrangle, but I think there is an extraordinary economy of truth in the assertion.

It was a hot, close day, and as I had been walking over the hard, flagged streets of London from early morning till late in the evening, every day for a week, by the time I reached the tower I naturally felt tired and fatigued. But I boldly began the ascent nevertheless. I walked, and walked, and walked and walked up those hard freestones stairs until I thought I should never reach the top. After a while I stopped for breath. I could feel the perspiration trickling down my face in a continuous stream, while every bone in my body was clanking to give in its resignation. Along came one of Her Majesty's faithful soldiers and servants.

"What ho, Guard! Am I near the top?"

"About half way up, my lord!"

And then I felt like repeating the last word just out of pure spite, and to see if it would have any kind of a soothing effect. But I contented myself with making a violent effort to smile, and appear to an unsympathetic world as if the news was the most welcome I had received since I left New York. Then I continued my journey up those winding stairs, and at last reached the top, thankful, but out of breath.

I also visited the Palace of Hampton Court, on the north bank of the Thames, twelve miles from London. This palace was built by Cardinal Wolsey, and afterward presented to Henry VIII. It contains many splendid paintings, while its gardens are exceedingly handsome, and kept in excellent order. Talk about California grape-vines! I saw a vine at Hampton Court, said to have been planted about a hundred years ago, which measures forty-one inches around, is trained to a length of several hundred feet, and yields about 800 pounds of grapes a year. The luscious bunches depending by thousands from its branches make a pleasant spectacle.

From Hampton Court I went to Richmond. Enjoyed the famous view from Richmond Hill, and then meandered through the park, one of the fairest and stateliest in England, containing nearly 2,300 acres, and stocked with about 1,800 head of deer. From there I proceeded to Kew. Kew Gardens are considered the handsomest in England. About every kind of tree, plant, or shrub of which any one has read or heard is to be seen here, and it is said that there is on the grounds the greatest collection of plants in the world. Every part of the globe is represented. Sometimes as many as 15,000 people visit the Gardens in a single day. But I am making a pretty long article of this, so I shall not impose upon your good nature any further in the present issue. Some other time I may tell you something more about the strange things I saw in Paris, Versailles, Rouen, St. Cloud, etc., in France. W. J. J.

Some Thoughts Regarding Telegraphers and Others.

The query comes home to telegraphers, whither shall we turn for that mental and spiritual subsistence which will insure us against any untoward results attendant upon the inevitable disappointments, trials and temptations incident to a profession, which, while singularly fascinating in its nature, is unusually exhaustive of health and spirits, and not commensurately remunerative pecuniarily? Many are happily solving the problem. Of this there is gratifying evidence. But one need scarcely more than glance about, with eyes and ears open, to be made aware that there is still room for missionary work. Certainly, nothing but good can come of discussing ways and means which conduce to the great

est good of the greatest number. The maxim holds that a man is known by the company he keeps. It is, however, a more nearly exact and self-evident proposition to say that a man is known by the literary company he keeps—by the books he reads, and, if possible, owns. There are those, high and low, who affect literary tastes and people because it is fashionable. Dickens' instincts were unerring when he penned his genially satirical portrait of the Veneerings. But these and all their kith and kin are pretenders. They compass but the ghostly shadow of an immortal substance. The devoted lover of good, wholesome, instructive books, periodicals and papers, has in them, no matter how chill the winds of adversity blow, "a present help in time of trouble, a friend that sticketh closer than a brother," a potential talisman that grows with his growth, and strengthens with his strength. In the mellow ripeness of his benighted old age, Benjamin Franklin testified "Next to trust in God, there is no better anodyne, or more potent balm, than literary occupation." All things being equal, knowledge is power. Of course, intellectual discipline does not supply brains originally lacking—it merely develops them. People are sometimes born utterly without common sense. They occasionally get to be educated fools or incompetents. Let us not confound the spurious with the genuine. Whomsoever desires to be right-minded, and to arrive at right conclusions should reason from correct premises.

Since the telegraphic calling is unique, original, and comprehensive, it must necessarily have a corresponding literature. We rejoice truly that this deduction is already a substantial fact. Much has been done, and the future holds rich promise. Our literature is not pretensions, not classical, in the ordinary acceptance of the term, nor yet entirely emancipated from those faults common to youth, and exuberant fertility of resources. But it has genuine wit, rare humor, and the tenderest pathos. We cannot prize it too highly. Its cultivation and encouragement will knit our interests more closely together, will inspire our spirits when they droop, and go very far toward ennobling our aims and making the world better for our having lived in it.

We hear now-a-days ad nauseam about high art in music, painting, sculpture, literature, and the drama. We have dilettante opinions concerning the "Old Masters," and the "classics" flung at our defenseless heads, until we feel the slow but sure approach of a frenzy kindred to that which Mark Twain has breathed forth "in painful measures," to the immense satisfaction of a major portion of the English-speaking race.

These things are, without question, well enough in their way, but it isn't every person who fancies walking this beautiful earth with his head in the clouds. Tastes differ—what is meat for one, is poison for another. Musical calisthenics and gymnastics are congenial to the initiated—to the technically cultivated. But it is when the great prima donna response to an *encore* with a simple ballad, rendered as her divine art only knows how, that she becomes the royally crowned mistress of the hopes and fears and mysteries of the average human soul. Surely Apollo's art was simplicity itself, and yet it almost gave ears to "stocks and stones," and drew to him the beasts of the field and the fowls of the air. Macaulay said that the proudest day of his life was when, after having delivered an address to his constituents of the City of Edinburgh, a garbled, horny-handed, blunt-spoken old Scotchman, a friend of his fathers, came up to him with this salute: "It was weel done, it was weel done, Meester Macaulay, but methinks I cud a'most ha' said it myself." So simply insinuating was the method and argument that the canny old man fancied the hatching of the ideas to be a sort of copartnership affair of Macaulay and himself.

A venerated professor of elocution used to point and illustrate his doctrine by this story: When in college he visited a lady friend who had a charming little girl that quite captivated him. remarking as much to the mother, the good lady, vastly pleased, said that the child should read for him. And so she came, in all her sweetness and purity and frankness, stood confidingly by his side, and while he stroked her golden curls, read for him a quaint pastoral poem. Said the professor, as he straightened back in his chair and a sad longing look came into his eye: "I never before or since heard anything so tender, so sweet, so inexpressibly natural and eloquent. That memory haunted me like a vision. But—execrations upon the day! a few years subsequent I again visited this lady, inquired after the child and spoke of the impression her reading had left with me. 'O,' said the mother, 'that isn't to be mentioned. You must hear her now, she is so

much improved.' The young miss was marshalled in, and my heart failed me at first sight. Her dress and manners were after the most approved boarding-school pattern. Her reading was—well, a nasal drawl and the quintessence of affectation. The contrast cut to the quick."

It is agreeable to some favored mortals to move on an elevated plane, to commune with kindred spirits, or to grope about in the "caverns of recondite knowledge;" but there is something far better. In one of his characteristic earlier poems, Lowell says:

"It may be glorious to write
Thoughts that shall glad the two or three
High souls, like those far stars that come in sight
Once in a century:—

But better far it is to speak
One simple word, which now and then
Shall awaken their free nature in the weak
And friendless soul of men."

There can be no doubt of this. To the majority of men, life is stripped of the rainbow hues of romance—is hard, prosaic, and well nigh cruelly real. Particularly is this true of our northern clime. The shadows of adversity, the tricks of that "fickle jade," Fortune, bring myriads of mankind into the borderland between hope and despair. This is a fearful ordeal, in sober reality, and, although its dread workings may not be visible to mortal eyes, it is like walking "through the valley of the shadow of death." Whomsoever shall prove himself a ministering angel in this supreme trial, bringing healing on his wings, cannot fail to be a benefactor to his race and thoroughly merits the rich meed of praise, "well done good and faithful servant." The secret of "high thinking and high living" is perhaps easier to arrive at than many realize. It is not a matter of sphere nor circumstance. "How shall we be truly philosophic? How shall we find that happy mean between extremes that signifies good, wholesome, cheerful, common-sense living—the sort which, come rain or shine, is always helpful, always 'climbing'?" This means "ennobling the common-place by a heroic spirit;" it means not only realizing the ideal, but idealizing the real. Life is largely, certain conditions given, what we make it, provided the effort be not too long postponed. And yet, unfortunately, millions of people, good enough in their way, haven't the moral resolution and mental stamina to arrive at such a conclusion practically. They need "boosting" all the while; they settle a perfect dead weight on their friends; they are constitutional trouble borrowers—in short, they must be coaxed, preached, or cajoled into understanding that "taking the years together, there isn't more night than day." Besides there are quantities of people who don't belong in this category and yet who enjoy and even crave the stimulus of sunlight, but haven't the faculty of conjuring it up. History proves that when such a state of things exist, the "man of Destiny" is sure to be forthcoming. The telegraph is young; still it is a gigantic enterprise—the "fourth estate" of our realm. Its literature is also young, yet it has passed wonderful vicissitudes. By this I mean the literature, pure and simple, of which THE OPERATOR is to-day an adequate, live exponent. Five years ago it would have troubled a prophet or the son of a prophet to have foretold the issue, so crude, slangy and smart was that lusty young bantling of whose immensely improved appearance we are justly proud and prospectively hopeful to-day. And the literary progress of which I speak, has been faithfully indicative of the elevated *morale* and *personnel* of the service.

Nor is this all, the odium that once attached to the representative telegraph operator is happily a thing of the past. A proud record proves beyond peradventure that a "telegraph operator" may be a thorough-paced gentleman, a cultivated student, a successful independent man, and not a vagabond and a wanderer upon the face of the earth. Whatsoever may be said to the contrary, most men believe easiest in him whose walk and conversation square with each other. The prophet who is not without honor in his own country is to be preferred before another. Nothing succeeds like success.

It has become an historic truism that the men who give a nation its literature, prescribe its "traditions, tendencies and purposes." It is vitally important that these men be "cast in the right mold." The profession has reason to be proud of its representative men. They have labored without ceasing for the upbuilding of their guild; they have wielded pens of grace and power; their fame has gone abroad in the land and their memories will be embalmed in the gratitude of generations yet to come. Let others heed these shining examples and make the very most of the talents God has given them.

REFERS NGUM

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

November 1st, 1877.

READ Mr. Munn's advertisement of visiting cards, &c., on first page.

THE story, "Wooing by Wire," by the late Miss J. J. Schofield, whose death by suicide is recorded in this issue, will be concluded in our next number.

A VERY sensible and well-written article on "Some Thoughts Regarding Telegraphers and Others," by Rufus Novum, will be found on page 5. You should not fail to read it.

WE beg to remind readers that no matter what telegraphic instrument they want, or by whom manufactured, it can be had through THE OPERATOR Purchasing Agency as cheap, and in many cases cheaper, than if ordered direct. We will thank them very much if in future they will send all their orders to us.

THE American quadruplex system of telegraphy has been tried on one of the London and Liverpool circuits in England, and so far has proved a great success. The weather, however, was very favorable during the experiments. It yet remains to be seen how the quadruplex will work when it has to contend against the damp, rainy weather for which England is noted.

ON Sunday night, October 14th, one of the most sudden and violent storms experienced for many years burst over the British Islands. Throughout the greater part of England it amounted to a perfect hurricane, destroying telegraphic communication by blowing down the lines, delaying trains, and unroofing buildings. The gale extended to Ireland and Scotland, interrupting telegraphic communications, and spreading destruction over a wide area. The French elections were held that day, and although we were very anxious over here to learn the result, no news could be got through on account of this interruption to the land lines in time for the papers of Monday morning.

IN "making up" the last issue of THE OPERATOR, there were in type two lectures on telegraphy—one by a gentleman in San Francisco, and one by Mr. Preece, of England. As the one followed the other, the foreman was instructed to make a slight change in the heading of the latter. But, compositor-like, he changed the wrong one, and the San Francisco address was given to the world as "A Transatlantic Lecture on Telegraphy," instead of merely an interesting one, as we had intended. Those who have since favored us with the information that San Francisco is an important city in California, will please accept this intimation. It was certainly an unfortunate thing for the foreman to do; but let us speak charitably of the dead.

NURSING VIPERS.

The following letter speaks for itself.

TO THE EDITOR OF THE OPERATOR:

Some months ago I offered to an intimate friend (?), an opportunity to practice in my office, with a view to his eventually obtaining a situation as an operator. Being dependent upon his own exertions for a living, I flattered myself that I was doing a noble and charitable act in assisting him in the above manner. He eventually became qualified to take full charge of my office, which he did during my enforced absence for two weeks on account of sickness. During this time I became the victim of his base ingratitude, he having communicated to the superintendent an exaggerated account of my neglect of duty, at the same time offering to take the office at a lower salary. As the superintendent has never visited my office, and having no method of ascertaining the facts of the case, he obeyed the inexorable law of supply and demand, and placed my friend and successor in charge without making any provision for me. Of course, there is no remedy for this, but I have learned a valuable lesson by dearly bought experience, and I consider it my duty to warn others against pursuing the same course.

This is but one of several cases that have recently come to our notice without effort on our part to collect them. Had they not been voluntarily narrated to us, we should have deemed the existence of such disreputable characters among us an impossibility.

A young lady in one of the branch offices in this city permitted a young girl acquaintance to come to her office and practice. When she thought that the student was able to transact the business alone, the operator was in the habit of taking an occasional half holiday in a kind of French leave fashion, and to prevent a knowledge of her absence at headquarters, got the student to sign the same letter as herself. This kind of thing may do for a time, but like the pitcher going to the well, it is sure to end disastrously at last. It so happened that the young lady, on one occasion, about two months ago, did not visit the office for two days, probably feeling that the student was amply competent to transact the business of the office, which consisted for the greater part of sending, and but little of that. During her absence, however, the guileless and unsophisticated student wrote Superintendent Brown, stating the length of time she had been in the office, that she had lately transacted nearly all the business, signing the regular operator's letter, and as nobody seemed to have been able to detect the difference, and the operator was in the habit of leaving her alone all day, and had not been near the office for several days at the time of writing, she thought she could manage the office very well, and considered it hardly fair that she should do all the work while another received the credit and salary. The Superintendent promptly investigated the matter, and the young lady was dismissed.

But the meanest case of this kind that we have yet heard, was related to us by a lady a couple of weeks ago. Nobody takes a more conscientious interest in the business of the company, or looks after its welfare more zealously, than does this lady. A young man whom she knew pleaded with her to let him come to the office and practice, and she at length consented. After a few

months he became a very fair plug, and when she accidentally scalded her foot so badly as to make it very difficult to stay in the office all day, she used to go home a little earlier, leaving him in charge. One day during her absence he wrote to the superintendent, saying that he had been in the office two years, had transacted all the business for several months, and as the regular operator often did not come near the office all day, he would like to be her successor on the pay-roll. The superintendent, who is a sensible man, and knows the lady too well to believe these charges, mailed the letter to her, with the following note attached: "You will see from this what kind of a person you are dealing with."

We have also known of cases where a man holding a position has assisted a friend to obtain a situation in the same service, who no sooner felt that he was secure in his place before he began secretly plotting for the downfall of his benefactor, in order to secure promotion for himself. These reptiles are often disguised in the garb of moral and virtuous citizens, and are strictly observant of all the rules by which we recognize the stamp of religious teaching. In assuming this role they become all the more dangerous, and though the keen-eyed man of experience may detect the illy-concealed duplicity, many are deceived until it is too late, and they fall an easy victim to their misplaced confidence and faith in mankind. It is no light matter to weaken the bonds of friendship, for the ranks or the cynic are already overflowing. There is, however, no reason why we should jeopardize our own prosperity, by training up a class of vampires, who, if not sufficiently degraded to actually work against our individual interest, will readily pursue this course, to the detriment of our brother operators, whose interests are identical with ours. By pursuing this selfish course of benefiting one's pocket in teaching students, an incalculable injury is being done to all parties concerned. Most of those who attempt the business find themselves eventually enslaved to a desk, at which the wear and tear of wretched Morse, the long hours, and cramped position lead them almost universally to a consumptive's early grave. Let the student hesitate before he takes the first wrong step. There is no greater responsibility than the guiding of the first footsteps which lead one to the opening skirmish in the great conflict of life. When once the spring-time of youth is mis-spent there can be no recall. In early days there was no warning voice. The telegraph world was a mysterious, unopened book. To-day there is no reason why all who can read and understand, should fail to thoroughly investigate the opportunities and promises which await the embryo telegrapher in these days of telephones and consolidations.

WE hope our readers will do all they can for us this fall in the matter of securing subscriptions. We shall publish next issue a list of premiums for clubs, and, in the meantime, the names sent us will be placed to your credit, and can be added to at any time. Don't neglect to say a good word for the paper whenever opportunity occurs, and get all the new subscriptions for us you can. Specimen copies will be mailed free. Send for as many as you think you can use to advantage. Orders can also be taken for LIGHTNING FLASHES and OAKUM PICKINGS, both of which will be mailed for \$2.00.

The Suicide of Miss Schofield.

The numerous telegraphic and other friends of Miss J. J. Schofield in this city, were greatly shocked at the news of her suicide at Niagara Falls on Monday evening, Oct. 15th. She had recently been employed in the Western Union office, cor. Broadway and Dey Street, in this city, and had left New York the Saturday evening previous, by the Erie train as was understood, for her home at Woodstock, Canada, where her parents reside. Instead of going directly home, however, she stopped over at Buffalo, where she appears to have made the arrangements for the tragical ending of her existence.

Miss Schofield was a young lady of much more than ordinary ability. She was an expert operator, and had shown literary talent of no mean order. She had many warm friends in this city, and in fact wherever she was known, who must sincerely regret the rash act which has terminated in so tragical and untimely a manner a life which there was every reason to suppose bade fair to be a happy and useful one.

Although somewhat depressed in spirits when she left here, no one of her friends, whom she bade good bye so calmly previous to her departure, suspected for a moment that she had any intention other than that of rejoining her family and friends in Canada. The death of two brothers and a sister from consumption last year, and the fact that symptoms of the same disease had been developed in her own case weighed upon her spirits and caused forebodings of an early demise, which she has too rashly anticipated.

It appears that Miss Schofield arrived at Niagara Falls at seven o'clock on Monday evening, and immediately sent a telegram to a Mr. C. A. Kelly in Toronto, to whom she was engaged to be married this fall, saying: "Trains do not connect. Can't get home to night. Am going crazy." The operator noticed that the lady looked ill, and in reply to a remark, she said that she had "neuralgia in the head so bad that it seemed she would go crazy." She then went over to Goat Island, saying she was an artist and wished to view the falls by moonlight. Next morning some books, a black bombazine sacque and other things were found, which were afterward identified as Miss Schofield's, and as the lady has not been seen since, the conclusion is inevitable that she jumped into the rapids and was carried over the falls, chosing, as one of the local papers says, the most favorable point from which to enact the closing scene of her life. The body has not yet been found, but the Niagara is a river which but rarely gives up its dead.

Miss Schofield was a very fair operator. She learned telegraphy in the Dominion office at Woodstock some time ago, and was subsequently promoted to the more important position of amanuensis in the Dominion Telegraph Company's executive offices in Toronto. She was well known as a contributor to newspapers, magazines, etc., and some of her writings possess real merit. One of her articles, "Wooing by Wire," a pretty little telegraphic love story, written just two years ago, and published at the time in the *Toronto New Dominion*, is commenced in the present issue of THE OPERATOR, and on account of the tragic manner of the writer's death will be read with peculiar interest by telegraphers at this time. Miss Schofield came to this city September 10th, being introduced by a gentleman connected with the

building, and was given a position as extra operator, which she held for two weeks. She was next in the electrician's office, as stenographer, for a month, and afterward returned to the operating room as copyist. She only retained the latter position three weeks when she resigned, saying her father had written her to come home, and left, as before stated, on Saturday evening, October 13th.

Let us Hear from you again, Helen.

Quite a little excitement has been occasioned in telegraphic circles by the publication of Helen's interesting reminiscences in last issue of THE OPERATOR. Letters on the subject reach us from all directions. Some pity the sorrows of the unfortunate ex-operator, while others again advise Helen to have nothing to do with him, on the ground that having already made love to two young ladies, and showing a very decided tendency to add herself to the number, demonstrates that he does not know his own mind long enough to make him a very valuable acquisition for any one. Others, this time of gentler sex, say they are dying to know just what answer, if any, Helen made to his note. One says that our advice, though good, was, in her opinion, entirely thrown away. Helen, she thinks, unless she be different from any other girl she ever knew, could not resist the temptation to reply to the letter—and wouldn't if she could. A well known telegraphic writer in this city sends us a little note, saying, "Who is Helen? I won't tell anybody." We don't think he will. But the following letter, all the way from Louisiana, is so fair a sample of those received, that we give it complete:

DEAR OPERATOR:

We enjoyed "A Young Lady's Interesting Reminiscences," &c., very much, it was *very* interesting indeed. And so that's the way the girls talk about the men! Well, if we were those fellows at "Handy Pill" and Deenville, think we'd "tie a crow bar round our necks and fling ourselves into the riv-i-er!" We feel like doing that any way, because we couldn't be in that "hardware man's" place. Oh! how we do envy his luck! But maybe he won't be so *fortunate* after all. She may conclude to take that excellent advice we saw in the same number of THE OPERATOR. Several copies of the paper find their way down here, and all who are so fortunate as to possess a copy, *vote for you* to call around and spend those "leisure evenings," and hope you may be successful in "getting away" with the "hardware man." Now if that young lady had only been on *our* line, I know of several nice fellows—not red-headed either—who would have been only too happy to have been allowed to make out her reports. The failure to procure a pass would never have kept *them* from going; they would have thought nothing of "counting cross ties" if there was no chance to ride. We lack only one thing in this part of the world to make us happy, and that is lady operators. We imagine them all to be angels, with the sweetest kind of dispositions, so of course they never "rush." Hope we may have the pleasure of seeing many more "interesting reminiscences" in THE OPERATOR.

Yours truly, FRANK H. EXUM.

MR. J. A. LANNERT, Cleveland, O., advertises in another column "An Outline of Practical Telegraphy," by Supt. J. P. Abernethy. We have received an advance copy of the book, and think it will be found very interesting to telegraphers. Besides hints and instructions in regard to Morse telegraphy, it gives a description of Gray's, Bell's, and Edison's telephonic inventions, and has also a chapter on railroad telegraphy. See advertisement.

Sparks.

A wag suggests that a suitable opening for many choirs would be, "Lord have mercy on us, miserable singers."

An orator declaring that Fortune knocked at every man's door once, an old Irishman said: "When she knocked at mine I must have been out."

An Indiana editor says: "Coal oil rubbed on the neck and head, will cure hog cholera; we have tried it." Who can dispute testimony like that?

"You're a smart fellow," sneered a lawyer to a witness, the other day. "I'd return the compliment if I wasn't under oath," replied the witness.

Gentlemen's hats, that last year brought \$3 apiece, can now be purchased for \$1.50; whereas it still costs a woman from \$15 to \$50 to go comparatively bareheaded.

"My business is talk," said a stump speaker. "I deal in words," "Yes," said a voice in the crowd, "and as long as I have known you your place of business has never been closed."

"Pray, Mr. Professor, what is a periphrasis?" "Madame, it is simply a circumlocutory cycle of oratorical sonorosity circumscribing an atom of ideality, lost in verbal profundity," "Thank you, sir."

"If there is anybody under the canister of heaven that I have in utter exorcism," says Mrs. Partington, "it is the slanderer going about like a boa-constructor, circulating his calomel upon honest folks."

At the picture gallery: Lady (with catalogue)—"No. 53, 'Eve tempted,'" Gentleman (desirous to know the painter's name)—"Who by?" Lady (shocked at his ignorance)—"Why, by the devil, of course."

During the riots in 1780 most persons in London, in order to save their houses from being burned or pulled down, wrote on the doors, "No Popery!" Old Grimaldi, to avoid all mistakes, wrote on his, "No Religion."

A ruined doctor having done his utmost to satisfy his creditors, said to them, "Gentlemen, I have been extremely perplexed till now how to satisfy you; but having done my utmost endeavor, I shall leave you to satisfy yourselves."

It was an Irish pilot who being asked if he knew of the rocks in the harbor, replied with confidence: "I do yer honor, ivery one av them. That's swan," he added, calmly, as the ship struck it, filled, and sank.

"Have you any boned turkey?" asked a hungry customer in a Nevada restaurant. The proprietor laid his hand on his revolver and cried, "No insinuations here, young man! We're honest here, and don't bone nothing!"

"Father," said a boy who got kicked in the face by a mule that he was annoying, "will I ever be as good-looking as I was?" "No," my son, answered the parent, "I don't think you'll be as handsome as you were, but you'll know a great deal more."

It was half-past ten as a Ninth street girl yawned and asked him if he liked poetry. He said, "Yes, dear," then she murmured,

"Now I lay me down to sleep,"

and it so disturbed his judgment that he took the old man's hat instead of his own.

"You must have lived here a long time," said a traveling Englishman to an Oregon pioneer. "Yes, sir, I have. Do you see that mountain? Well, when I came here that mountain was a hole in the ground." The Englishman opened his half shut eyes.

Kirkcubright once sent up a canny Scot to the Crystal Palace, who had the happiness, while there, of hearing the cry "The Queen!" A sylph-like damsel implored him to "lift her up;" and how could he decline so sweet a burden? He held her high above the crowd, and he did not deposit her on the floor until her majesty was gone—and also his watch and money.

It is wonderful the jokes those paragraphers can get off even on grave subjects. The *Norristown Herald*, last week spoke of the arrest of a man for opening a grave and stealing the handsome coffin in which a child was buried, and adds: "Only the fact that he was discovered in time prevented the rascal from stealing the hole too." The *Evening Telegram*, after recording the death of a child from tumbling into a boiler of hot water and being boiled, says that its not being of Teutonic parentage was the only thing which prevented the child from adding potatoes and onions and converting itself into an Irish stew.

Some Marvellous Telegraphing and the Men Who Did It.

"Then, like a pawing horse let go,
She made a sudden bound."

Recently the English telegraphers working on a quadruplex circuit between London and Liverpool accomplished the feat of transmitting 48 messages in an hour on each of the four sides of an American Quadruplex instrument which has been put up for the British Government by our Mr. Gerritt Smith.

Considerable conjecture having been indulged in as to what our boys could do on this side of the Atlantic, a test was determined upon, and at 10:30 A.M. on Tuesday, October 23, the New York and Boston quad circuit was manned at this end by Messrs. Baldwin, Wood, Moreland, and C. F. Benett. The result of one hour's work was 252 messages, regular business, or an average of 63 messages per man. The circuit worked very badly, Boston getting us imperfectly. The second trial took place on Wednesday morning, the 24th, the New York operators being Messrs. Baldwin, Wood, Moreland, and Catlin. At the end of the hour 288 messages were turned out in first-class style, being an average of 72 messages per man.

Allow me to observe here that an average of 72 messages per hour on each of the four sides of a quad is fast work. The same trouble was discernible in the instrument as on the first day, though in a less marked degree, viz., Boston did not get us well. The total number of words sent and received during the hour on the second trial was 9,000.

A SKETCH OF THE NEW YORKERS.

Charles F. Benett is an old operator, and has worked all over the country from Canada to the Rocky Mountains. He sends at a terrific rate of speed, never stumbles, and is a great favorite in the office, where he is familiarly known as "Dad." He was on the first day's trial, and sent 65 messages under very adverse circumstances. His total number of words was about 100 short of the number Wood sent on the second trial. Benett can readily send 75 messages an hour, and his writing will go through any number of repeaters. He signs "Bt."

Fred Baldwin, "Bw," is considered the best receiver on the day force, and is always steady and reliable. The operator has not yet been found who can rush him. He received 69 messages on the first trial, and on the second 74 messages, containing 2,400 words, which shows the rate of speed to have been forty words per minute; this was the fastest time made. Fred is called "Baldy" for short.

Joe Wood, the youngest operator of the team, signs "Jo," and is one of the regular men on the Boston circuit. Joe sent 57 messages on the first trial and 76 on the second—the highest number attained. His messages, however, contained less words than Baldwin's. He was heartily congratulated on his success, for Joe is a nice little fellow, and we all like him.

John Moreland bears the reputation of being the best receiver on the night force, some say in the United States. Unlike Baldwin, he copies behind. He received 61 messages on the first trial and 73 on the second. He asserts his ability to handle 80 per hour. Moreland signs "Jm." and personally is a remarkably fine fellow, though quiet and unobtrusive.

Fred Catlin was not on the first trial; he sent 63 messages on the second. His side of the quad worked badly, and he had to slack up. Gerritt Smith considers Catlin the best sender in the office, and had him taken off the southern wires, to send on the long Chicago circuit.

The question having been raised as to the relative merits of Baldwin and Moreland as receivers, we quote the opinion of our Celtic friend, Peter McCawley, of "Fx" office, on the subject: "Either of them can take anything the wire will fetch."

THE BOSTONIANS.

Tom Davin, who sent the 2400 words, signs "D." He is so old an operator that the Morse has grown down his back. In addition to his telegraphic capability, Mr Davin is a fine singer.

Billy Kettles, who received the 76 messages from Joe Wood is an old operator. During the war he sent some 2400 words of the finest Morse ever heard in this country, from Washington to Charley Weir, in Cincinnati, in an hour, and that individual laconically remarked, "O. K. Booh!"

Charlie Stanford, who sent 73 messages, made some famous time on the Portland circuit, a couple of years ago, in a friendly contest with Kettles. Like Davin he is a musical character. A few years since he contributed some very readable sketches to THE OPERATOR under the *nom de plume* of "Sol Tare."

Ned Beardslee, who received from Catlin, has worked in the Boston office about fifteen years, and bears a first-class reputation as a telegrapher. He rarely makes any remarks on a wire, and is an easy man to get along with.

The remaining Boston operator, Mr. Charles Finch, I have not the honor of knowing. He was one of the receivers on Tuesday.

No, thank you, gentlemen, I am wearing a blue ribbon now, but I still sign the Scarlet Letter, A.

The Telephone Unmasked.

It is time that the atrocious nature of the telephone should be fully exposed, and its inventors, of whom there are any quantity, held up to execration.

When this nefarious instrument was first introduced, it was pretended that its purpose was an innocent one. We were told that the telephone would enable a man in New York to hear what a man in Philadelphia might say; and although it was difficult to understand why anybody should want to listen to a Philadelphian's remarks—which, notoriously, consist exclusively of allusions to the Centennial Exhibition and an alleged line of American steamships—there was nothing necessarily immoral in this possible use of the telephone. Then it was claimed that by means of the telephone conversations could be carried on with other than Philadelphians, and that political speeches delivered in Washington could be heard in any city of the continent. As the President was at that time making speeches in Vermont instead of Washington, the public was not alarmed by this announcement, and it was not until the telephonic conspirators mentioned that the uproar of a brass band could be transmitted to any distance through the telephone that any general feeling of uneasiness was developed. Nevertheless, the vast capabilities for mischief of the telephone, and the real purpose of its unprincipled inventors, have been studiously concealed, and it is only by accident that the greatness and imminence of the danger to which the public is exposed have suddenly been revealed.

Suspicion ought to have been awakened by the recent publication of the fact that if the lamp-posts of our city were to be connected by wires, every confidential remark made to a lamp-post by a belated statesman could be reproduced by a telephone connected with any other lamp-post. It is true that this publication was ostensibly made in the interest of the police force, and it was recommended that patrolmen should use the lamp-posts as means of communication with police headquarters. It was evident, however, that the result would be to make every lamp-post a spy upon midnight wayfarers. Men who had trusted to friendly lamp-posts for years, and embraced them with the utmost confidence in their silence and discretion, would find themselves shamelessly betrayed, and their unsuspecting soliloquies literally reported to their indignant families; strange to say this suggestive hint of the powers of the telephone attracted no attention, and has ere this in all probability been forgotten.

A series of incidents which has lately occurred in Providence has, however, clearly shown the frightful capabilities of the telephone. Two men, to whom, so far as is known, no improper motive can be attributed, were recently experimenting with a telephone, the wire of which was stretched over the roofs of innumerable buildings, and was estimated to be fully four miles in length. They relate that on the first evening of their telephonic disputation they heard men and women singing songs and eloquent clergyman preaching ponderous sermons; and that they detected several persons in the act of practicing upon brass instruments. This sort of thing was repeated every evening, while on Sunday morning a perfect deluge of partially conglomeration sermons rolled in upon them. These are the main facts mentioned by the two men in what may be called their official report of their experiments, but it is asserted that they heard other things which they did not venture to openly repeat. The remarks of thousands of midnight cats were borne to their listening ears. The confidential conversations of hundreds of husbands and wives were whispered through the treacherous telephone, and though the remarks of Mr. and Mrs. Smith were sometimes inextricably entangled with those of Mr. and Mrs. Brown, and it was frequently impossible to tell from what particular wife came the direful threat, "O! I'll just let you know," or from what strong husband in his agony came the cry, "Leggo that hair!" the two astonished telephone experimenters learned enough of the secrets of the lead-

ing families of Providence to render it a hazardous matter for any resident of that city to hereafter accept a nomination for any office.

Now, it has been ascertained that the wire of this telephone was not in contact with any other wire, and thus the hypothesis that the sounds heard by the two men were messages in process of transmission by the usual telegraphic wires is untenable. Moreover, a little reflection will show that cats do not send telegraphic messages, and that leading citizens do not transmit by telegraph petitions to their wives advocating a policy of conciliation in respect to hair. The scientific persons whom the two men have consulted have no hesitation in saying that the telephonic wire picked up all the sounds in its neighborhood by the process of induction. When the wire passed over a church, it took up the waves of sound set in motion by the preacher, and reproduced them on the telephone. In like manner it collected the sounds from the concert halls and dwelling houses over the roofs of which it passed, and the peculiar distinctness with which it transmitted the remarks of cats was due to the fact that it must have passed in close proximity to several popular feline resorts.

We can now comprehend the danger of the telephone. If any telephonic miscreant connects a telephone to one of the countless telegraphic wires that pass over the roofs of this city there will be an immediate end of all privacy. Whatever is said in the secrecy of the back piazza by youthful students of the satellites of Mars will be proclaimed by way of the house top to the eavesdropping telephone operator. No matter to what extent a man may close his doors and windows, and hermetically seal his keyholes and furnace-registers with towels and blankets, whatever he may say, either to himself or a companion, will be overheard. Absolute silence will be our only safety. Conversation will be carried on exclusively in writing, and courtship will be conducted by the use of a system of ingenious symbols. An invention which thus mentally makes silence the sole condition of safety cannot be too severely denounced, and while violence, even in self defense, is always to be deprecated, there can be but little doubt that the death of the inventors and manufacturers of the telephone would do much toward creating that feeling of confidence which financiers tell us must precede any revival of business.—*New York Times*

The New Orleans Press on the "Pooling" Arrangement.

The New Orleans *Picayune* referring to that part of the annual report of President Orton, published in the last issue of THE OPERATOR, in which reference is made to the A. and P. company, says in an editorial entitled, "Well Earned Success," that the two companies, formerly rivals, will now become a unity in interest if not in name and administration. Cessation of injurious competition will be the immediate effect of this union of interests. Economy in management and a reduction of joint expenses will also result, enabling the directors to reduce general charges for telegraphic services. The employment of the telegraph by the public is increasing at a rapid rate, and every reduction of general charges appears to result in an increase of business, which redounds to the advantage of telegraphic companies. The Western Union operates nearly 77,000 miles of wire, with 7,500 offices. If by the contemplated and almost consummated union with the Atlantic and Pacific a large area is added to the field of operations, all under enlightened and efficient management, substantially the same as that which has built up the Western Union Company, the public will have good reason to expect large benefit in the way of reduced tolls on messages. In spite of the usual croaking about monopolies, the thinking classes are well aware of the increased power which capital and services acquire from concentration, of the value of that intelligent directorship which massed capital is certain to command, of the great increase of opportunities to economize which is made possible by enlarged operations, and especially of the fact that it is the best policy in all enterprises, great and small, to consult the wants of the public. A reduction of rates, which would not be practicable with many small telegraphic companies, at once becomes not only feasible but profitable to a single company aggregating a strength equal to that of all the smaller ones. There is reason to hope that in a few years telegraphic charges will be so reduced as to increase the use of the telegraph ten fold, and that much of the correspondence now passing through the mails will then be conducted over the wires, with an immeasurable bene-

fit to general business. The time is not distant when the contents of an average letter of business may be sent by the electric magnets from New Orleans to Boston for a charge scarcely more than postage would have been sixty years ago. Combination of capital under enlightened management will hasten a consummation so desirable.

The *Democrat*, of the same city, in reply, says that the above article is an ingenious and special defense of the principle upon which the iniquitous legislation of Congress and the Louisiana Legislature for ten years past has been based. When the Western Union Telegraph Company was without a rival it taxed the public without mercy, and was insensible or indifferent alike to pleading or denunciation. Its vast wealth, accumulated through its monopoly, has enabled it heretofore to crush out or buy up every rival or competing enterprise, and thus keep up its rates. The Atlantic and Pacific, stronger than its ill-fated predecessors, has succeeded so far in making a fight against the Western Union, and, as far as the competition has extended, the rates of telegraphing have been reduced. Now the Western Union is making a powerful effort to buy out the Atlantic and Pacific, and when it succeeds the old extortionate and oppressive rates will be re-established. And yet this issue the *Picayune* desires and advocates. There is not an iniquitous or oppressive monopoly in Louisiana, or in the United States, that may not find in the *Picayune's* utterance a specious argument for its pernicious existence and perpetuation. The Western Union and many other monopolies have money enough to purchase the property of a thousand papers like the *Democrat* and *Picayune*, but none of them have money enough to obtain the publication of such an article as the *Picayune's* in the columns of the *Democrat*.

A Telegraphic Volume.

"Lightning Flashes and Electric Dashes" is the title of a second work on the literature of the telegraphic art, issued by W. J. Johnston. In its perusal we find able articles from the pens of all the prominent writers on the subject, who are entertaining and suggestive in their practical illustrations of the minutiae pertaining to the art, which has become one of the most potent agencies in the diffusion of knowledge of current events that are hourly transpiring in the political, social, mercantile world, that has resulted from scientific discovery. In treatment these sprightly writers avoid dry technicalities which make the recital of the multifarious humorous incidents thoroughly understood and enjoyed by those who have not been initiated into its mysterious ramifications. These authors have also a keenness of perception, and appreciation of the humorous side of their business, and a sparkle that at once puts the readers *en rapport* with the subject. They are veritable punsters, and the hits and wit come click, click, like a charge of electricity through the wire until they have emptied their volleys into the mirthful phrenological bumps of their readers, who cannot do else than receive it, and partake with a relish of its ludicrous situations. The life of Professor Morse is ably written, and gives many points not heretofore known in his eventful life. We recommend the perusal of this instructive and amusing work to our readers. W. J. Johnston, publisher, 11 Frankfort St.—*American Art Journal*.

Diagrams of Targets over the Wire.

In your issue of October 15 you mention the fact of a San Francisco paper publishing from telegraphic reports diagrams of the targets used at the International Rifle Match at Creedmoor. The feat is not without precedent, however, as you will doubtless recollect the surprise the New York *Herald* gave its readers two years ago, when the American Rifle Team visited England. The morning after the shooting the *Herald* published diagrams of each target.

The feat which at first sight seems an almost incredible one, looks more simple when we suggest the preparation, in the editorial sanctum, before hand, of two similar sheets, each the size of the target to be used, and ruled very closely in two directions, so that the lines intersect. Then number every line on the margin. The reporter uses one sheet, and by saturating it with oil it will, if thin, become sufficiently transparent to enable him to trace with lead pencil the marks on the target. What easier than than to send by telegraph the intersections which may be made frequent enough to locate so closely as to answer all practical purposes.

J. F. H.

Dashes Here and There.

The A. & P. office in Bath, Me., has been closed. The W. U. has fitted up a new and nice office there.

Very little has been said about the lightning rod man for the last six months, but there has been very little of him to say anything about. —*Detroit Free Press*.

A confirmed bachelor says, that it is better that lady operators should keep their number sheets in ship-shape, than that they should know all about Ohm's law, polarization, and electromotive force.

Naturalists are puzzled to know why swallows perch on the telegraph wires. The reason is perfectly plain—they are sending messages to say they are coming.—*Exchange*. Wonder if they imagine we'll "swallow" such a story as that.

As the Western Union Telegraph Company has banked over two million dollars during the past year, clear profit, it would be in order for the employees of the company to demand a restoration of the old rates of wages.—*New Orleans Picayune*.

The Burlington *Hawkeye* says that a lightning rod man of three years' standing, who makes his headquarters in that city, wears with pride a watch guard made of various sized shot, which from time to time have been picked out of his back and legs.

Telegrams, it is stated, are cheaper in Switzerland than anywhere else in the world. But we don't believe the difference in price is so great as to make it an object to our business men to go to Switzerland whenever they want to send a telegram.—*Norristown Herald*.

There are moments of despondency in every life; when Shakespeare thought himself no poet, Raphael no painter, and the intelligent translator of dots and dashes asks half in dread, whether you said Peter Sonesbro, P. E. Terson & Bro., or Peterson & Bro.

The *Danbury News* says that the best way to make good connections is to marry a minister's daughter. Ministers have been getting into so much "trouble" lately, that we fear the advice is "open" to criticism. Besides a minister's daughter might be as "cross" as any other, though they are no doubt adepts at "breaking" susceptible young men's hearts.

The subterranean telegraph wires in Germany have proved highly satisfactory. The conductivity of the buried wire, instead of decreasing, has, on the contrary, somewhat increased, and no fault in the insulation has made itself apparent. It is believed that in the long run the buried wires will prove the cheapest. Posts and insulators, constantly demanding renewal, are thus dispensed with.

Mr. M. Wennman, Telegraphic Engineer, Stockholm, Sweden, in a letter ordering copies of "Okum Pickings," "Lightning Flashes," and renewing his subscription to *THE OPERATOR* for 1878, adds: "I will embrace the opportunity of expressing the great interest with which I have followed your last trip to Europe. Hope the equinoctial storms have not annoyed you much in returning from Liverpool."

You may talk as much as you please about man being able to accomplish anything he undertakes if he sets about it in earnest—we demur. When it comes to reaching around to the back dead square between the shoulders, a fat man has to let out the job. He may pierce the ocean wave with the lightning's flash, make fraud an honest profession, get up a telephone that will carry Russian names without bending the wire, but he comes to an impassable stone fence sometimes.—*Cincinnati Breakfast Table*.

A disastrous fire occurred at Madison, N. J., on Sunday evening, Oct. 21, originating in a store near the D. L. and W. R. R. depot. It soon spread to the depot, which was in flames in a few minutes. As soon, however, as it was thought to be in danger, the instruments and handsome switch board, accommodating twelve or more wires, were removed, along with the tickets and books, and carried to a place of safety. Shortly afterward the wires were melted, and fell down. Three of them were carried to the freight depot adjoining, and grounded on the railroad track. An instrument was set up on an empty kerosene barrel. Monday morning a gang of line men arrived under the charge of Mr. Able of Newark, who soon put things in ship-shape. The Western Union is at present located in Fickett's Building. It is said that a new brick depot is to replace the one destroyed.

"LIGHTNING FLASHES" IN NEW ZEALAND.—The following is an extract from two letters just received from a subscriber of *THE OPERATOR* in Blenheim, New Zealand: "August 16th.—The three copies of 'Lightning Flashes' to hand. Many thanks for kind attention to order. The book gives great satisfaction, and is much appreciated by those operators in this country to whom I have shown my copies. Please send five more by return mail." "August 22d.—In addition to my order of 16th inst., please forward four more copies of 'Lightning Flashes'. P. O. order inclosed."

On the steamer Farraday, now lying off Roberts' Stores, in Brooklyn, last week, experiments were made with the new Siemen's electric light. This threw out a light so intense as to dazzle the eyes of people on the New York side. The electricity is produced by a powerful battery, worked by steam, and which makes 700 revolutions a minute. The electricity is conducted to the lamps by two wires, having on each end a carbon point. When these are joined there results a dazzling white light. The heat generated by the electricity was sufficient to melt a piece of glass in about six seconds.

The importance of the naval engineer nowadays is illustrated in the case of the new barbette ship *Temeraire*, of the British navy, which has thirty-four engines on board, exclusive of the powerful pistons and cylinders that propel the ponderous vessel. The capacity of these alone is equal, it is said, to 7,000 horse power. There are also feed engines and starting engines, steering engines and capstan engines, engines to pump with and engines to hoist with; there are even engines to aid in working the guns, to assist in torpedo service, and for turning the magnet machine that gives out the electric light.

Settling the Percentage of Expenses.

The Western Union and A. & P. Companies do not seem to get along very harmoniously together. The general agreement, known as the Windsor Hotel contract, apportioning 87½ per cent. of the gross earnings to the Western Union and 12½ per cent. to the Atlantic and Pacific, has been ratified and adopted by both boards of directors; but although the spirit of that contract implies that not only shall each company bind itself to maintain the lines and apparatus in efficient working order, but do everything in its power to increase the gross earnings, it has not been embodied in proper legal form. Vice-President Green, of the Western Union, said to a reporter last week:—The main point discussed at the meeting of the committees was the percentage of expense each company should bear. It is evident that the Western Union Company would not submit to any wholesale closing of offices of the Atlantic and Pacific Company without participating in the profits of the retrenchment in expenses. It has been determined to insert a clause which shall settle the exact proportion to be given to each company. It has been very hard for the committees to come to any understanding on this point, and therefore the contract has not been signed; and as the views of the respective committees differ very materially, the meeting was abruptly broken off on Wednesday very inharmoniously, and everybody felt very uncomfortable."

It therefore appears that, while the Western Union owns the majority of the Atlantic and Pacific stock, it failed to exact the resignation of the directors, and they control the company until the election in May. They possess the power of making rates, and it may turn out that the Western Union, while practically owning the Atlantic and Pacific, may be forced to enter into a ruinous competition until its own board is put in at the spring election. The Atlantic and Pacific directors claim that, while an arrangement was made by which their corporation is to receive one-eighth of the total receipts, no provision was added as to the amount of expenses it will be called upon to sustain, and it may be that the total receipts will be absorbed by being charged with an undue proportion of expenses. In this case, they could be held to an accounting by Atlantic and Pacific stockholders for dereliction of duty, and might become personally responsible for the sacrifice of property. The Western Union made a proposition that the Atlantic and Pacific directors should be charged with 15½ per cent. of

the expenses of the two companies, which the Atlantic and Pacific directors regard as unfair, being three per cent. more than its proportion of the receipts. After several conferences, the Western Union came down to 141, but to this the opposition would not concede; then a further concession was made to 144. Still no agreement was reached, and matters remain at a deadlock.

Another conference to arrange the division of expenses will soon be held. Vice-President Green, of the former company, says that the figures of the past year's business show that the Atlantic and Pacific ought to pay 13 79-1000 of the expenses; but that company contends that it should not be charged more than 124 the percentage of the gross earnings that has been apportioned to them. It is certain, Mr. Green says, that a satisfactory settlement will be consummated as soon as the two committees meet again.

The late downward turn in Western Union stock, in which it fell from about 82 to the neighborhood of 77, was helped, if not caused, by the above breaking of negotiations between the two companies as to the division of expenses under the arrangements for pooling receipts. The stock advanced again to 82 in three days, on rumor that the question of expenses will be adjusted between the two companies. Thus, there was enough left unsettled in the so-called "Windsor Hotel compact" to enable Mr. Gould to make a 5 per cent. turn in Western Union, although the pooling of receipts settled too much to permit of a 10 or 20 per cent. turn in the stock. How often the 5 per cent. turn will be repeated before all voice in A. & P. Telegraph matters finally passes from Mr. Gould it would be rash to guess.

Echoes from 197.

The Jersey City Dramatic Club gave their first public rehearsal, before a fashionable audience, on Oct. 24th. Miss N. G. Lowell, appearing as Laura Leeson in the two act drama of "Time Tries All." Mr. J. Stark, "S J" is Treasurer of the Club.

The latest addition to the day force, is Davy Mitchell. -73, "M E," glad to see you.

The distance between London and Liverpool, and New York and Boston is about equal.

Miss Nina Hicox, of the Western Union office, Oxford, Mass., has been visiting the city recently.

We have also an older operator than the English men, his name is Jerry Borst, and he signs Bo.

H. L. Gramzow has returned from a very enjoyable vacation of several weeks duration.

John F. Cleyerdon has an addition to his family. John and the boy are doing well.

Mail Agent Holmes says that the love letters sent by the gentlemen at 197 are generally misdirected. Charles will have his pun.

We call attention to the fact, that Joe Wood sent 76 messages in one hour on the quadruplex. We also respectfully call the attention of the officers to Joe's salary.

A 197-ite speaking of Spiritualism, says that he doesn't believe in any medium except the 'circulating medium,' and that has become so scarce that his faith in it is shaky.

An order has been issued by Manager Downer restoring the old working time, 94 hours instead of 10. It goes into effect Nov. 1st, and the ladies and gentlemen of the day force are much pleased therewith. The "Co-operative" day of the night men has also been abolished.

Mr. Thomas J. Geary, of 407 Broadway office, feels very proud of his girl. Mr. Geary had the misfortune of losing each of his two previous children, and hopes that this time there will be no "breaks." So do we. "Gy" is a very accommodating fellow, and deservedly popular with his confidantes.

An English writer says that the Russians fill their commissioned offices of the army with men of high birth instead of with humbly-born ability. But the press operators at 197 are of opinion that they fill such offices with men who bear the longest and hardest names without regard to birth.

Answers to Correspondents.

J. C. P., Morales, Texas, says: "Goods ordered twenty-ninth, received, all but the snuff. Please forward at once;" 12 paid. Is check to the above, correct? Please answer through THE OPERATOR." Answer. No. The check is 13. Twenty-ninth is two words.

H. W. S., says: "In the early part of last year a company started in New York, called the U. S. Postal Telegraph Company. They proposed sending *fac simile* copies of messages. W. E. Sawyer was the inventor. Can you inform me what has become of them?"

Answer.—We have not heard anything at all of the company lately, and therefore regret that we are unable to give you any information.

PERSONALS.

Miss C. Morse manages the A. & P. office at Karns City, Pa., and Frank Bigelow the P. & K. C. R. R. office.

Geo. W. Hurd who has been on the sick list for the past two months is visiting friends at Buffalo, where he will remain until his health improves.

A Western Union office has been opened at Greenville, Fla., with Mr. Edward King in charge. The Monticello, Fla., office has been re-opened. Mr. Cohen is the operator.

One R. Valentine, of Englewood, Ill., advertises for "young men to learn telegraphy, and earn \$40 to \$100 a month. Small salary while learning. Situations furnished free. Can be done in four months."

Mr. Geo. W. Kern for several years an operator of the A. & P. Telegraph Co. has been appointed as clerk and operator for the Government at the Navy Yard, Washington, D. C. He has also a branch of the W. U. office there.

Mr. Chas. A. Payne, who has been for six years operator in the Dominion telegraph office, at Port Stanley, has been promoted to be manager of the Dominion office at St. Thomas, vice Mr. G. T. Charis resigned. Mr. F. W. Payne takes charge of the Port Stanley office.

Dany Boyle, operator at works of P. P. Mast & Co., Springfield, Ohio, returned on the Britannic, Sept. 21st, from an extended trip to the Emerald Isle. Mr. Boyle was but a few days behind Mr. Johnston, during his travels, as he heard of his visit at Dublin office, as well as at other points."

At a meeting of Western Union operators at St. Louis, Mo., October 17th, appropriate resolutions were passed on the death of Miss Nellie J. Nolan, late operator in that office, and the intention expressed of "contributing jointly for the erection of a monument as a testimonial of love and regret in memorium of the departed."

E. A. Tandy died of typhoid fever at Charlemont, Mass., Oct. 18th, after only ten days illness. He was a young man of unexceptional character, a Christian, and honored by all who knew him. The funeral took place at Athol, on Friday, and was attended in the capacity of pall bearers by six of his former associates, who worked on the same circuit.

Mr. C. H. Davis was married to Miss Ida May Seeley at Elmira, N. Y., October 15th. Mr. Davis worked in the Western Union offices in Elmira, this city, and latterly in Chattanooga, but has now gone into mercantile business with his brother, in Whitney's Point, N. Y. His friends in the profession we are sure will wish him and his bonny bride every happiness.

Mr. S. J. Armstrong manager of the W. U. office at Karns City, Pa., left for Pittsburgh Oct. 13th. His departure is regretted by all who knew him, and especially by the business portion of the community: is a fine operator, deservedly popular and will merit success wherever he goes. His place will be filled by Mr. C. C. Adams, formerly of the Parker City Oil Exchange.

A nickel-plated Private Line instrument manufactured by the Western Electric Mfg. Co., was awarded to Mrs. John M. Farrell of Allentown, Pa., wife of the agent and operator of C. R. R. of N. J., in a friendly and social contest between that lady and Mrs. Charles Cary of same place, Mrs. Farrell obtaining the largest number of votes. The instrument is very handsome, and reflects great credit upon the manufacturers.

Mr. J. P. Hines, of Green River, Wyo., sends us a circular headed "A Decision at Last," and signed E. D. Fisk, notifying him that he has drawn a gold watch and chain worth \$150, at a drawing held at New Orleans, July 28, and asking him to forward \$15 to pay expenses, and asks us to expose the swindle, which we make haste to do. Don't send any money to parties of this kind, whom you don't know. Such lottery schemes as this may be set down at once as frauds.

At the Empire Pipe Co.'s office, Karns City, Pa., will be found Mr. E. C. Bishop, a very efficient and gentlemanly operator. As the empire will shortly be known as a thing of the past, Ed. will soon enjoy the pleasures of an unlimited vacation. In the Standard Oil Co.'s office, Wm. McAlpine handles the key. Though a young operator Mc is a credit to the profession. H. B. Van Keuren is at present in the C. C. Co. office, but as the Standard Co. has absorbed the C. C. Co., he will probably take charge of the books.

Our friend, Mr. J. C. Williamson, of the New York Dispatch, on his return from Washington last week, purchased and sent Mr. C. C. Mothershead, of the Western Union main office, a copy in cloth of "Oakum Pickings," with his compliments, in acknowledgement of courtesies received from that gentleman during his recent visit to the National Capitol. When Mr. Williamson again takes his walks abroad, we hope any telegraphers he may meet will treat him with equal courtesy.

Under the head of "A Faithful Servant" the Chattanooga Journal of Commerce publishes a special dispatch on the death of Mr. Eugene L. Castner, dated Philadelphia, October 17th, as follows: Eugene L. Castner an operator in the employ of the Atlantic and Pacific Telegraph Company, died suddenly this morning. Deceased was well known in the telegraphic fraternity, having been in the profession in New York, Philadelphia, and other cities, over sixteen years. During the Centennial he was manager of the Atlantic and Pacific Company's office at the grounds, after which he was chief operator at the main office of the same company, which he resigned to take the management of the office in the Marine Exchange. He leaves a wife and one child.

BIRTHS.

Sept. 27, to Mr. E. W. Barnum, night report operator, Elmira, N. Y., a daughter. Nine pounds.

Oct. 6., to Mr. Thomas J. Geary, of 407 Broadway office, New York, a fine girl.

Oct. 8, to W. J. Reeves, agent and operator, C. P. R. R., Emigrant Gap, Cal., a fine daughter. First edition.

Oct. 12, to Frank P. Enoch, assistant manager, main office, Springfield, O., a son. Weight, 12½ pounds. First edition.

Oct. 23, to Mr. C. A. Scheffer, operator, Elmira, N. Y., a daughter. Nine pounds.

Oct. 25, to George P. Riley, cashier, Western Union Telegraph office, Albany, N. Y., a daughter.

MARRIAGES.

DE LANOY—MACCORMACK.—Oct. 15, at the M. E. Church, Cold Spring, N. Y., by the Rev. Mr. North, Mr. Harry De Lanoy, ticket agent, N. Y. C. & H. R. R., Tarrytown, to Miss Nellie McCormack, of Cold Spring.

HOFFMAN—McCLINTOCK.—Sept. 26, at St. John's (Episcopal) Church, Liberty, Va., by the rector, Rev. H. Suter, Mr. W. H. Hoffman, train dispatcher and operator, J. P. and M. R. R., Tallahassee, Fla., to Miss Mary S. McClintock, of Liberty.

MAK—HAIGHT.—At Greenbush, N. Y., by the Rev. Mr. Clark, Henry Mack, night operator of Boston and Albany R. R. office, to Miss Harriet L. Haight, both of Greenbush.

QUINA—SWAINE.—In St. Michael's Church, Pensacola, Oct. 24, by Rev. I. A. Bergrath, Mr. E. Gale Quina, manager Pensacola Telegraph office, to Miss Alice Swaine of same city.

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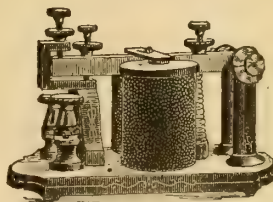
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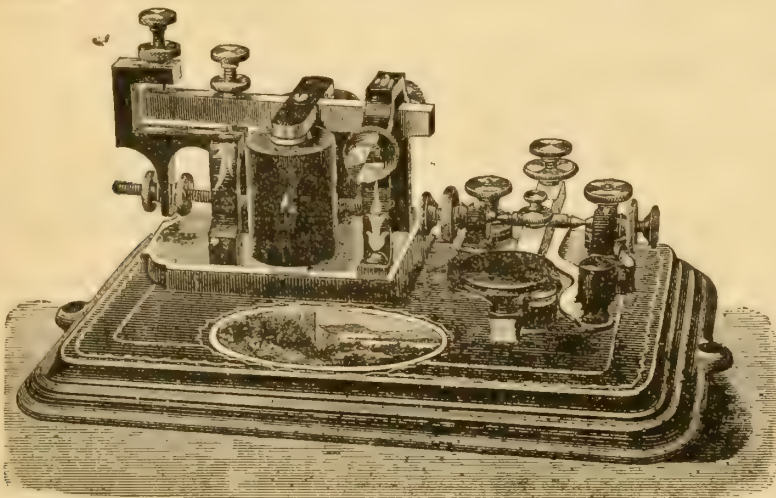
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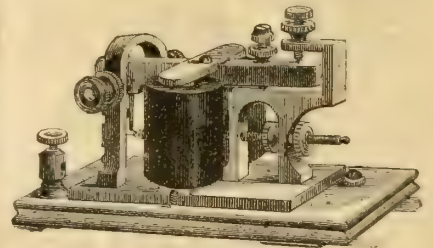
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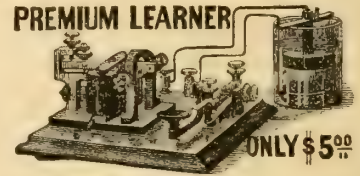
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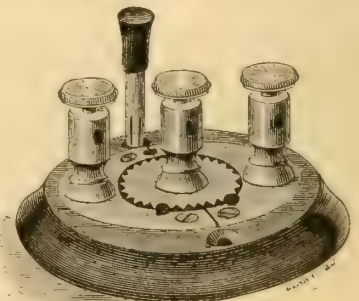
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A JOURNAL OF
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November 15th, 1877.

Volume VIII.

Whole No. 90.

A Fifty Dollar Man's Soliloquy.

To be, or not to be an operator?
Whether 'tis nobler in a man to suffer
The slings and arrows of outrageous fortune,
Or to take arms against this sea of troubles,
And, by resigning, end them? Resign—swim out
No more: and by that "swim" to say we end
The headaches and the thousand dismal doubts
That rack our brains; 'tis a consummation
Devoutly to be wished. Resign—swim out;
Swim out! Perchance to beg; aye, there's the rub,
For by resigning beggary may come!
So ere we shuffle off this daily toil
We must e'en pause. There's the five years
That we have spent in learning this profession—
Five years lost from the heyday of our youth;
Those years devoted to another trade
Had made us independent of the grasp
Of those two corporations which divide
Telegraphy between them. We need not then
Have borne without redress the slights and spurns
That patient merit of the unworthy takes;
The false economy of great corporations
Which clouds the prospects of ambitious plucks
By cutting off promotion! Who would bear
Toil and toil, with prospects such as ours,
But for the knowledge that, as 'twas his choice,
He must with patience bear the ills he suffers,
Not fly to those unknown, which may be worse?
He who resigns begins the world anew;
Unlearn what took him weary years to learn;
Throws all those years away! Necessity
Does thus make cowards of us all.
And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought,
And enterprises of great pith and moment
With this regard, their currents turn awry
And lose the name of action.

—J. S. in *The Telegrapher*.

Wooring by Wire.

BY MISS J. J. SCHOFIELD.

CONCLUDED.

So one day, when there is a lull on the line, he calls her up and artfully remarks:

"I have been getting some new pictures taken."

"Are they good?" asks Mildred.

"Yes, splendid," he modestly replies. "Best I've ever had."

And then he waits, expecting her to say she would like to see one. But she only asks:

"When did you have them taken, and how did you manage to leave the office long enough to sit for them?"

Tom is covered with confusion and feels himself a swindler, for the pictures have been lying in his desk since last Christmas, and she would naturally suppose, from the way he spoke, that they had only just been sent home from the artist's. In order to get out of the dilemma gracefully, he ingeniously ignores the first part of her question, and answers the second:

"Oh, I got Phil Burke to run the office for a few hours. He is able to manage two offices when he likes to exert himself, you know."

He has not time to say more, for some one is waiting to get business off. But he does not give up the notion—it is not his way to do that. He begins casting about in his mind for some other way of accomplishing it. By-and-bye he forms a bold resolution.

"That's it," he exclaims. "I'll send her my photo, and ask her to return me her's."

He is not afraid she will refuse—no one ever does refuse Tom anything he sees fit to ask.

Next day Miss Sunnidle receives a letter, with the picture of a very handsome man enclosed, together with a little note. The note is beautifully written, but carelessly worded.

"I take the liberty of sending you my photo," it runs. "Please return the compliment by first mail."

She is surprised and perplexed. What does it mean? It is something new for her to receive a note from a gentleman, still more a picture. She scarcely knows whether to be pleased or offended. He is very nice looking, but the note sounds cool and conceited. What right has he to send his picture without asking permission?

Then the spirit of mischief enters in and takes possession of the little lady.

She gets a dainty sheet of note paper, and demurely writes thereon: "Many thanks for the compliment. I return it by first mail, as requested."

This she encloses in an envelope, together with the picture he sent, addressed it to him, and drops it in the post-office without delay.

He only lives ten miles away, and it is now nine o'clock—it will reach him by noon. So she quietly sits down to await developments.

Tom is furious when he receives it—just at first. He is not used to being snubbed, you see.

But presently the humor of the affair forces itself upon him, and he laughs heartily.

"It just serves me right," he reflects. "It was rather impudent of me to send it. Well, she knows how to hold her own, at all events, for all she seems so simple."

But still Tom feels rather sore about it, and never speaks a word to her all day. When evening comes, instead of wishing her good-night, as usual, he goes off without a word.

In the meantime Mildred is waiting and wondering what he will say. She expects him to take it good-humoredly, and perhaps make some half laughing apology. But as the day passes away, and he gives no sign, she grows anxious, and wonders if he is very angry about it. However, he will be sure to call her up to say good-night, and then they can have a little laugh over it.

When night comes and she finds that he has gone away without calling her, her foolish little heart sinks within her. She closes up the office, and walks slowly to her boarding house, feeling very wretched.

She doesn't want any tea, she says, when her landlady knocks at her bedroom door to announce that it is ready. During the hot summer night that follows she tosses up and down restlessly, sorrowfully, and finally cries herself to sleep.

Of course it wasn't right—it was very undignified and silly; but don't be hard on the poor little creature. Her's was such a lonely life—her heart was so hungry for friendship, and Tom had been very kind to her. How could she help feeling sorry she had offended him?

Next day Tom relents—he bids her good-morning.

She answers quietly, pleasantly, just as usual. But for worlds would she have him think that she had noticed last night's neglect and been troubled by it.

Then Tom says, "I owe you an apology for sending that note yesterday, but I did not think you would be so hard-hearted as to snub me quite so unmercifully."

"Oh, I'm sure I never thought of snubbing you," she protests, very earnestly, "I only meant—"

But she finds a difficulty in explaining what she did mean, so naively adds, "I simply obeyed orders. You told me to return it, you know."

"But you knew well enough what I meant," says Tom. "I've a great notion to send it back to you again. Would you think me very presumptuous if I did?"

No, she would not think him presumptuous. And her heart flutters strangely.

"Would you send me back one of yours?" continues Tom, craftily following up his advantage.

But to this she answers not a word. She is thinking, "Would he want it if he knew I was thirty years old, and so dreadfully plain?"

Next day the handsome picture comes back to her again. She does not return it this time. She takes it home, instead, and dreams over it.

But Tom has hard work to persuade her to send him her's. And, at length, when she does so, she tells him very honestly that he must not think it is like her, for her pictures are always a grand improvement on the original.

It is true that she makes a very good picture. The large brown eyes show off to full advantage, the "tip-tilted" nose takes a more classic outline, and you would never suspect that her hair was red. But, on the other hand, her gentle, womanly expression is not enhanced by the photographer's art, and you miss the wondrous sweetness of her smile.

He has an album full of pretty girls' pictures at home, but none of them ever received so much attention from him as this. He looks at it again and again, studying every point of view, and at last, when

no one else is in the office, consistent Tom, who has a great contempt for "softness," and was never known to act the "spooney" in his life, casts a furtive glance around, as if afraid of being seen, and actually raises the poor little spinster's picture to his lips! After which he blushes furiously, calls himself a soft head, and tries to make believe he is only stroking his moustache with the card.

Presently he calls Miss Sunnidle, and asks her if she will remain a little while after office hours, as he has something to tell her.

She consents, and during the rest of the day keeps wondering what it can be.

And at night, when business is over, and the line is quiet and still, he cautiously cuts off all the offices on the other side of him, by putting on the ground wire, so as to guard against listeners, calls "Sg," and begins to tell it.

It is only the old, old story over again—the story of heartfelt respect, of undying love. But to Mildred it sounds strangely new, and strangely sweet.

It is hard—oh, so hard! to put it away from her, but she does it bravely, firmly.

When he vows to love her, and be true to her all life long, and asks her to plight her troth to him in return, she answers:

"No, it is not me you love, but some ideal assemblage of virtues of your own creation, which you fancy I resemble. When you saw me, and discovered your mistake, you would repent your bargain. Why, I'm an old maid, with red hair!"

She makes the announcement slowly, as though conscious that she is thereby demolishing every vestige of romance connected with her in Tom's imagination, and feeling sadly reluctant to do it.

Tom laughs. It is so funny of her to think it such a dreadful thing to have red hair!

He solemnly declares that red is his favorite color in hair, and as for her being an old maid—well, the more aged she is the more sense she is likely to have. He tells her he doesn't set much value on a pretty face. It is her good qualities he is in love with—her purity of heart, her nobility of mind, her sweet, unselfish disposition. With her to help him he could lead a better, nobler life than he could ever hope to do alone. She would be his good genius, his guardian angel—restraining him from evil, encouraging him in good.

But the little woman is inexorable. She holds steadfastly to her point, and refuses to engage herself to a man whom she has never seen, and she won't tell him whether she likes him or not.

Tom is in despair and at last asks if he may drive over on Sunday and see her.

She agrees to that, and hastily bids him good night, half suspecting that it is all a wild dream, out of which she will presently awaken, and laugh at her own folly.

It is three whole days till Sunday, and Tom and Mildred both think that days never dragged themselves out to such an interminable length before since the world began.

It comes at last, the longed for, yet dreaded Sunday. Mildred rises early, though she knows he cannot be here for some hours yet. She is too restless to lie still.

Very anxiously she gazes into the glass and sees a wee face, with a feverish flush on the cheeks and eyes glowing like stars.

The day is going to be intensely hot, and she arrays herself in a fresh white muslin, cool and dainty looking, with pale blue ribbons at the throat.

Again she stares earnestly into the glass, sees that her dress is very becoming, feels conscious that she is looking her best, and is glad. Then comes the reaction. Something tells her it is not quite fair to make herself look better than usual. So she takes off the pretty white dress a little sadly, and dons a quiet dove colored silk, that makes her look like a little Quakeress.

A perfect simpleton!

Well, perhaps so. But she knows very little of the ways of the world, and is true to her own idea of honesty. After all, there are many things worse than being a simpleton.

She fastens a bunch of pansies and mignonnette in her bosom, and, book in hand, descends to the parlor to await his coming.

About an hour afterward she hears a knock at the door, and then a tall, fine looking man, with wavy brown hair, and eyes of the deepest, darkest blue, is shown in.

He stands before her, clasping her little hand in his, respectfully, yet tenderly.

And this is Tom? She looks up to him without a word, wondering wistfully if he is very much disappointed in her.

If he is he does not show it. He picks up the

book she let fall on his entrance and passes some remark about it. Soon they are engaged in an animated discussion of books and authors. After awhile he skillfully managed to bring the conversation around to the point where they dropped it the other evening. He wants her to tell him if she thinks she could learn to love him, now that she has seen him.

"The tell-tale flush spreads swiftly over her cheeks and brow, and she begins to tremble. But she willfully refuses to answer just yet. She will see—she will tell him some other time—she must get ready for church now—the bells are ringing."

So they go to church together, and mingle their voices in prayer and praise. After that they take a quiet, pleasant ramble through the cool shady lanes, then go home and have lunch, and another delightful long chat in the quaint old parlor. The kind hearted landlady, with whom Mildred has boarded for years, is "glad that Miss Sunnisdale has got a beau at last—and such a likely looking gentleman, too. But if she should get married and go away, the place will seem very lonesome without her."

It seems quite probable that she will get married, too, for when Tom leaves for home there is a tiny ring gleaming on the little old maid's finger, and a bright, happy look in her face, which makes her seem ten years younger, and almost pretty.

Some weeks afterward, when Phil Burke rushes into the office, and excitedly demands if it is true that he is going to marry the operator at "Sg" office, he calmly answers, "Yes, I have taken your sensible advice, and put my theory into practice by asking her to become Mrs. Tom Gordon. It may be a very risky way of choosing a wife, but I'm satisfied I've made a good hit of it. She is as good as gold—the best little woman that ever lived; and I don't believe that I would ever have found it out except by working with her over the line."

Phil congratulates his old friend very heartily, but is still rather doubtful of the advisability of "wooing by wire."

As for Mildred, she no longer disputes Thackeray's assertion that a woman may marry whom she likes. Her prince has come at last.

Waiting.

"In the darkest night,
In the bright daylight,
In earth and sea and sky,
In every home of the human heart
Will love be lurking nigh."

N. P. Willis.

"Good night, and many thanks for giving me so much of your precious time. I shall certainly call you to-morrow evening."

That was the beginning. That conversation was held after nearly every other operator had left his or her office for the night. After she had given her good night, and a few polite words, a fair-haired, blue-eyed girl sat for many minutes peering into the twilight without, with a dreamy look on her beautiful face, and a pleased expression in her eyes.

"I wonder why he never spoke to me before," she murmurs. "He is so agreeable and kind! I wonder if his face is as beautiful as his language?"

He faithfully kept his word. The next evening found them chatting on the wire with as much spirit as though they had been acquainted for years. The next evening it was the same.

Days grew into weeks, and three months passed away, and not one evening went by without some pleasant words and a cheerful "good-night" from Arthur Linsey.

There have been a number of letters, too. Words which may mean everything or nothing were to be spoken, and lest some operator lingering late in the office should hear them, they were put on paper and sent by mail, to be read and re-read, smiled over and dreamed about and then answered by fair Aggie Delisle.

Many bunches of flowers had found their way to her table, to be watered and tended, and talked to as if they were human and could understand it all. A volume of Byron's poems in all its wealth of power and passion is near the vase of flowers, and on the blank page in the front of the book is written in bold characters.

"Aggie Delisle.

From her friend and admirer

ARTHUR LINSEY."

But an evening came when no "good night" sounded over the wire for waiting Aggie, when a troubled look came into the sweet blue eyes, and a weary expression rested on the face of the young

operator as she started homeward, disappointed for the first time in her new friend.

A lovely twilight in June, that month of "perfect days." The sky is "deeply, darkly, beautifully blue." A few bright hued clouds still linger near where the sun went down a few minutes ago. Raymond Tracy and Aggie Delisle, who have been watching the sunset together, still linger, gazing upon them.

There has been silence for a time, but it is broken presently by Tracy, who says, softly, as he takes his companion's hands in a grasp:

"This world is full of beauty
When the heart is full of love."

Miss Delisle, Aggie, my heart is very full of love to-night, and has been for many weeks. I hardly need tell you that you are the object of my affection. I love you so much, Aggie, that I sometimes tremble at the intensity of my feelings. I have wealth enough and to spare, and no one to share it with since I lost my mother, a year ago. Will you be my wife, Aggie? My own loved, cherished wife? You shall be supplied with everything that wealth can purchase or affection suggest. Answer me, darling. Do you consent?

Why should not Aggie Delisle have accepted this man? He was rich, handsome, noble, and he loved her as few men ever love a woman. She realized all this. She deeply respected him, honestly admired him, but could she ever love him?

Her mind has wandered away from the man whose whole future happiness depends on the words she may utter the next time she speaks. Nothing but a memory stands between her and Raymond Tracy with his wealth and his great love for her, for it is months since Arthur Linsey's last "good-night" sounded over the wire for her. But she refuses him, and, in the deepening twilight, a man wends his way slowly homeward, almost broken-hearted, but trying, as few are obliged to try, to "suffer and make no sign."

The fair young face has lost something of its freshness; the fair blue eyes have in them a look of sadness which we did not observe a year ago; the laugh is less merry and frequent, and it is the whispered opinion of many that Aggie Delisle ought not to be in a telegraph office. The work does not agree with her.

But Aggie only smiles when by accident she hears any of this talk, and wonders what these people would say, if they knew it was only the thought of what might have been that has wrought the change. So she sits in her office, day after day, hoping, praying, waiting. Will he ever come?

"Ah! well for us all some sweet hope lies,
Deeply buried from human eyes.

And in the hereafter angels may
Roll the stone from its grave away."

MISS L. A. CHURCHILL.

Caught by Telegraph.

I was telegraph operator and station agent on one of the Western lines of railroad, when this adventure, of which I am going to tell you, happened to me.

It was a wild, stormy night, and as the depot was nearly half a mile out of town, the set of loafers which usually collected about the stove in the waiting-room had eventually concluded to seek some place nearer home to spend the evening in, and, for a wonder, I was quite alone.

The express from the West was due at nine-fifty. After that I should be at liberty, and I began to wish the evening was over long before the train came along, or else that I had some one to talk to, for the depot was in one of the most lonesome spots that could have been selected; the wind kept up a dismal moaning in the pines close by, and every now and then seemed to be positively howling in the wires of the telegraph. I began to feel nervous and fidgety.

At last the train came. I was also express agent, and the expressman on the train handed me a heavily sealed envelope, remarking as he did so, "Be careful of that, Branthwaite. There's a big bonanza in that package if it were yours or mine."

"Money?" I asked, noticing that there were but two passengers getting off—two men in shaggy overcoats and slouchy-looking hats, whom I concluded, without thinking much about them, or paying but little attention to them, to be hunters returned from some up-country trip.

"Yes; a trifle of twenty thousand, I believe," an-

swered Phillips. "Old Powers is sending it down to his son, who's putting up a mill somewhere near here, isn't he?"

"Yes, on the other side of the river," I replied. It's lucky to have a rich father, Phillips."

"You're right there," answered Phillips.

And then the train started off, and I turned and walked toward the office.

As I neared the door, with the package in my hand, one of the men, who had been watching me, made a spring toward me. I don't know how I happened to be on the lookout for them, but I must have been, for I jumped back almost the same instant he made his move, and before either one of them comprehended what I was about, I had made a dive between them and succeeded in getting into the office, and had the door bolted almost before I knew what I was doing.

I heard a volley of curses hurled after me, and then I knew by the sounds, and the creaking of the door, that both of the men were trying to break it in. But I had no fears of their doing that.

It was of hard wood, well seasoned, and would resist all their efforts in that direction.

I put the package in the safe and looked it securely before I stopped to think what was to be done. Then I sat down to think, while I could hear the men talking outside. I knew they were holding a council over the means to be used to effect an entrance, and obtain possession of the money I had received.

It was anything but a pleasant situation to be in. Here was I, alone, half a mile away from any assistance, at ten o'clock at night—and a stormy night at that—and the probabilities were that nearly everybody was already in bed. If they were not, no one would think of coming to the depot at that time of the night.

Outside were two desperate men, who knew I had a large sum of money in my possession, and they knew that if they could effect an entrance, I would amount to but little in the way of preventing an accomplishment of their villainous purpose.

Suddenly a thought occurred to me. The clerk at the hotel where I boarded had taken a fancy to telegraphy, and we had put up a wire between the hotel and the depot.

Why couldn't I advise him of my danger and have him send help?

I heard a new sound at the door just then which sent the blood in great frightened waves all over me. The men had begun to cut their way in with pocket knives!

I rushed to the instrument and called George. What if he had gone to bed, or should be out? I turned pale at the thought.

But pretty soon a response came back. He was there. Go ahead.

I began and wrote:

"I am in danger. Two men are trying to gain admittance for the purpose of robbing the express safe. Send help immediately, for God's sake. Not a minute to lose!"

"Slower," telegraphed George, who had not been practicing long enough to be able to read very well.

I went over with the message again; but I suppose excitement made my writing indistinct, for again he sent back word:

"Slower, and more distinct! Can't make it out!"

Good God! Before I succeed in making him understand me they would be through the door, I thought, with a cold sweat breaking out all over me. But I went over the message again, and this time he caught it, and sent back a hurried "All right. Hold out for ten minutes."

The men were digging away like beavers. I could see the points of their knives once in a while, as they splintered away fragments of the panels. But I knew that it would take some time yet to cut away enough for them to make an entrance through. How I wished I had a pistol!

I waited in feverish impatience. Suddenly there was a crash, and one panel was stove in by the foot of one of the men.

"Ah!" he grinned, with his leering face at the aperture. "You see we mean business, don't you? What are you going to do when we get in, eh?"

I didn't know. Die, I supposed, if they took an idea to put an end to me into their heads. Why didn't George and the help he had promised come? It seemed to me that they had had time enough to make a ten-mile tramp.

"We've got the second panel almost ready to stove in," said the other man, chuckling horribly over the cheerful information. "Then, I guess, Tom, can crawl through. You might as well be opening that box o' your'n, an' git out that bundle we're after. It'll save all on us considerable trouble and time."

Crash came his foot against the panel, and it burst into splinters, and my heart fairly stopped beating when I saw one of them thrust his head and shoulders through the opening. I seized the poker, and struck him over the head with all the force I could muster. He rolled out a volley of curses, but I was master of the situation at that particular moment.

Suddenly there was a sound of voices, and then the man outside cried out that they were "nabbed," and tried to make his escape. But I knew by the sound that he was caught, and was struggling with his captors. There were several pistol shots fired, and eager cries, during which the poor wretch in the door made no effort to escape, but lay there limp and motionless. I began to fear I had killed him. I drew back the bolts, and got the door open just in time to see the other one, overpowered, a prisoner in the hands of half a dozen of the boys from town.

Then we got the man out of the door. He wasn't dead, but insensible, my blows with the poker had been too much for him.

I bought a pistol the first thing next morning, and was on the lookout for robbers and adventurers after that; but that was the only adventure of any account that happened to me while I staid there. If it hadn't been for that telegraph which George and I had put into operation, I rather think I should have finished up all my earthly adventures that night.

A Lightning Feat.

An Omaha boy looked about for an opening by which he might enter into the busy life of the world and fit himself to take a man's part. All the avenues to place and preferment seemed to be closed to him. He thought he would like to learn telegraphy, but none of the city offices would take a student; they had no room to spare. But the boy, though somewhat discouraged, did not despair. He borrowed a book containing the telegraphic alphabet long enough to copy the characters, and these he studied intently. His next step was to make a little instrument which should as closely as possible resemble a telegraphic key-board, so that he could make the sounds. This he did out of a copper two cent coin, and a piece of steel from his sister's corset. With this novel key-board he could imitate the sounds produced by the operators when at their actual work in transmitting messages. By careful study of the alphabet, which he had copied, he could now sit at home and work out messages on his little key-board at pleasure. This was, of course, excellent practice, for it trained his memory, his perceptive faculties, and his hand, all at the same time.

One day, after this, he again applied at a telegraph office in the city for employment, and was told as usual, that there was no room. He ventured to say that he knew the alphabet, and could telegraph "some."

"Let me see you try," said the man in charge of the office, and our young student took his seat at a real key-board, with a throbbing heart, for the first time in his life. But his studies that he pursued by himself alone, and the practice that he had performed on his little two cent piece, by his father's fireside, now came to his assistance. They had given him a certain skill, and confidence that is born of skill, and these carried him through his trial handsomely. He performed the alphabet without a break, and then made up little messages and worked them off in the most satisfactory manner. "You may bring a chair to-morrow, and I will give you a place in my office," said the manager. The offer was gladly accepted. A few months later—the time was shorter than in any other case on record—our young student had passed through his trial period, his apprenticeship, and was given a telegraph station far west on the line of the Union Pacific Railroad.

There he performed his duties acceptably, and was favored with an opportunity to prosecute his studies and make still further progress in his profession. A fierce storm which visited that section after he had been some months at the station, showed that he had made good use of his time. Then, as not unfrequently happens during the progress of electrical storms, the wires became unmanageable, and no messages could be sent or received. At this juncture a train arrived at our student's station which was eastward bound, and which it was exceedingly important should be sent through to Omaha at once. What was to be done? It would be unsafe to let the train go forward without knowing what was on the track before it. Our student tried the telegraph again watching every

indication with the utmost eagerness. He signalled the next eastward station and listened intently for a response. Then he signalled the same station again, and this time watched the movement at his key-board. He heard nothing, but he could see a faint movement of his key. An idea of the true state of affairs flashed across his mind at once; there was not strength enough in the battery to send a message by the usual way, by sound, but there was enough to see that the key moved. He seized a happy thought, and acted on it instantly. Could he not telegraph by sight to and from the nearest eastward station? He could, and did. Finding the track clear for this portion of the way, he seized his lantern and at once started forward with the train. On arriving at the next station the same experiment was repeated, and communication had by sight with the station next eastward. Then the process was repeated to another station, and so on to Omaha.

When Superintendent Clark learned that a train had been run safely over a good portion of his road by telegraph, at a time when he knew that the electric currents were so much disturbed that no message could be sent from his office over the wires, he asked for the man who had been able to accomplish the feat. Our student did not return to his remote western post, but was immediately promoted to a place at home, in Omaha, where, surrounded by his family and many friends who feel an affectionate interest in his advancement, he may be able, as we have no doubt he will, to work his way to still further victories in the battle of life.—*Omaha Journal of Commerce.*

The Inventor of the Telephone.

Professor Alexander Graham Bell, inventor of the telephone, second and only surviving son of Prof. A. Melville Bell, inventor of visible speech, was born at Edinburgh, Scotland, on March 3, 1847. Mr. Bell belongs to a family of teachers. His grandfather, Alexander Bell, was long established in London, and celebrated for his success in removing impediments of speech; his father practised the family profession in Edinburgh; and his uncle, David Charles Bell, in Dublin. The three British capitals were thus, for many years, professionally occupied simultaneously by members of the same family.

But Professor A. Graham Bell has gone beyond the "family profession" by his grand invention of the telephone; although, no doubt, the world is in some degree indebted for this marvel of science to his preparatory studies and training for the inherited work of removing impediments of speech.

Telegraphy employed much of his time and thoughts from a comparatively early period, and the bold idea which he has now successfully developed into the speech-transmitting telephone is known to have been in his mind, as a possible achievement and an object of practical endeavor, for years before it took form and substance in his hands.

An invitation to introduce visible speech into the day school for deaf mutes in Boston having been made to Professor A. Melville Bell, he obtained the transfer of invitation to his son, to whom the teaching of the system was now finally consigned. The success of the Boston engagement led to similar invitations from other similar institutions in Northampton, Hartford, etc., and Professor A. G. Bell soon became widely known throughout the United States in connection with the teaching of articulation to deaf mutes. His subsequent appointment as Professor of Vocal Physiology in the Boston University has given him the opportunity of training teachers to carry out his plans in deaf mute institutions; and at the present moment his pupils, by direct or indirect instruction, number some thousands in these establishments in the Eastern and Western States.

Recent events have shown that while the days were thus engrossed with professional duties, the midnight lamp had been constantly burning, and the exploring mind had been restlessly at work in its favorite fields. The telephone is one of the results. This instrument is sufficiently wonderful in its effects, but is further remarkable as a purely scientific invention, having been completed in theory before a single experiment was made. The telephone was gradually worked into practical shape by the solitary inventor toiling at his night's labor of love after the day's labors of duty were done, and sometimes scarcely allowing himself an interval of rest between the two.

Professor Bell's achievement obtained for him, a few weeks ago, a distinguished honor to be con-

ferred on so young a man, in his election as a Fellow of the American Academy of Arts and Sciences. Scotland may well be proud of such a son, as America such a citizen.—*New York Scotsman.*

Echoes from 197.

McLaren Campbell is subbing at 197.

Just one hundred lady operators in the office.

Mrs. Reynolds and Miss Sykes work the "M S" duplex.

Mr. William T. Stone, an old Hartford boy, is on the night force.

Mr. William Taylor, who left us last spring, is again on the day force.

The discipline of the operating room is as perfect as that of the Roman army.

Miles O'Reilly writes poetry every night before going to bed. He is unmarried.

Miss Annie Nicholls is making rapid progress with her practice on the Motor Printer.

Miss Pearson has no regular wire just now, but she seems to enjoy being "relief."

Among the visitors recently at 197 was Mr. James H. Lyman's daughter, a bright and pretty child.

The operators are to have a half day off duty on Thanksgiving, November 29. Rough on the turkeys.

Charlie Parr has been taking a few days' vacation. Parr is a gentleman, with all that the word implies.

Chief Stockton L. Griffin is popular with his men, and deservedly so, for he is uniformly fair and courteous.

E. W. H. Cogley's return was the occasion of an enthusiastic welcome to him from the boys. It was a regular ovation.

Miss Monaghan has been transferred from the main office of the Atlantic and Pacific to the ladies' department at 197.

The grasshoppers have been going for Mr. Locke again. Abe knows no such word as fail; he is at work with us like a hero.

Mr. W. G. Magowan has been transferred from the city lines to the main office. Mr. Magowan is a gentleman of superior education.

The Thanksgiving lists which adorn the bulletin boards were made out by George K. Walcott, and reflect credit on his taste and skill.

At the billiard match played in this city, Nov. 13, Mr. G. B. Hubbell, manager of the Western Union office, Hartford, Conn., was the referee.

Tete-a-tete between two lady operators in the elevator. Number one—How men would be loved if they were only lovable. Number two—Yes, and how lovable women would be if they were only loved.

Telegraph machinery has been put up on the Boston and Philadelphia circuit in New York office, which embraces a set of duplex and quadruplex instruments on the same desk and wire. They are so placed that they can be made to work well in any conceivable way. There are a greater number of connections made than on any other set of instruments in the office, probably in the world. The Senior Chief and Mechanical Engineer Morris, planned and successfully carried out the work.

Mr. Stephen Longfellow of Cambridge, Mass., a nephew of the poet, has invented a ship's compass, designed to overcome variations of the needle due to local causes, such as the use of iron in construction or the carrying of large masses of iron as cargo. The bowl of the compass is surrounded by four magnets, which are insulated by means of porcelain or glass knobs so completely that a six-pound magnet placed within a very short distance does not affect them. They are put in slides around the upper part of the bowl of the compass, and, being attached to jointed arms, can be readily adjusted to the plane of the chord in a broken circle, or grouped together on one side of the compass. One of Mr. Longfellow's compasses has been made for him by an optician of this city, and the needle shows practically no deviation when masses of iron are brought near it, although the same masses of iron cause a marked deviation in an ordinary compass.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

November 15th, 1877.

"A Tramp Operator," by Ruddy, will appear in our next issue.

WE wish it particularly understood that we will change addresses as often as desired. When requesting a change, always give the *former* as well as the present address.

THE annual meeting of stockholders of the International Ocean Telegraph Company will be held at noon of Tuesday, Dec. 4, at their office in the Western Union Building in this city.

THE OPERATOR is always stopped at the expiration of the year, or of the time for which it is paid; so that if you wish to continue it, it would be well to renew your subscription at least one week before the time expires.

SINCE the division of expenses has been definitely settled, supplemented by a rumor of an increase of rates, the price of the stock of both telegraph companies has risen. Western Union is now selling at 79 asked, and A. and P. at 24 asked.

THE neatest and most appropriate holiday present that a telegrapher can make, either to a person in or out of the profession, is a copy of "Lightning Flashes." Prepaid to any address for \$1.50.

THE steamer *Minia* succeeded, November 13, in grappling the shore end of the Direct cable, which was broken about ten miles southeast of the Isle of Shoals. It was tested and found perfect. The end was sealed and buoyed, and electricians expected to make a splice the following day if the weather proved favorable.

THE OPERATOR will be sent to new subscribers or renewals from November 1st, 1877, until Jan. 1st, 1879, postage prepaid, for \$1.25. This will give Miss Schofield's story, "Wooing by Wire," complete.

THE new American Ocean Cable Company is represented by Mr. Garrett of Baltimore, and by Mr. Cornell Jewett, the great original Colorado beetle of American diplomacy. It is to go by way of the Azores, and to land in Spain. As it is to be limited to charge twenty-one cents a word, it is thought the stock will be chiefly, if not exclusively, subscribed in Colorado.

Good news for those about to renew their subscriptions. We have decided to send THE OPERATOR or from November 1st, 1877, to January 1st, 1879—and a copy of "Lightning Flashes," to the same or separate addresses, on receipt of only \$2.50. THE OPERATOR one year and "Oakum Pickings," paper, \$1.75. Both books, \$2.00.

Mr. Edison's Latest Invention.

The press of this city has given considerable attention during the past week to a wonderful invention by Mr. Edison, of Newark, by means of which the words of a man may be audibly reproduced at will years after they have been uttered. As in the case in Mr. Edison's speaking telephone, the tones are propagated from a vibrating metallic diaphragm, but in the phonograph, as the new contrivance is called, the vibrations of the plate are recorded by indentations in a strip of paper which, by a simple piece of mechanism, may afterward be made to communicate the original vibrations to another diaphragm, and thus bring out the words as they were at first heard. If it shall ever be possible to reproduce the quality of a voice, upon which the recognition of a speaker largely depends, the phonograph will place it in our power to listen to the voices of the dead long after the lips which uttered them shall have crumbled to dust. A strip of indented paper travels through a little machine, the sounds of the latter are magnified, and posterity centuries hence hear us as plainly as if we were present. Speech has become, as it were, immortal. Speaking of this wonderful invention the *Scientific American* says: The possibilities of the future are not much more wonderful than those of the present. The orator in Boston speaks, the indented strip of paper is the tangible result; but this travels under a second machine which may connect with the telephone. Not only is the speaker heard now in San Francisco, for example, but by passing the strip again under the reproducer he may be heard to-morrow, or next year, or next century. His speech in the first instance is recorded and transmitted simultaneously, and indefinite repetition is possible.

The new invention is a simple affair of vibrating plates, thrown into vibration by the human voice. It is crude yet, but the principle has been found, and modifications and improvements are only a matter of time. So also are its possibilities other than those already noted. Will letter writing be a proceeding of the past? Why not, if by simply talking into a mouthpiece our speech is recorded on paper, and our correspondent can by the same paper hear us speak? Are we to have a new kind of books? There is no reason why the orations of our modern Ciceros should not be recorded and detachably bound so that we can run the indented slips through the machine, and in the quiet of our own apartments listen again, and as often as we will, to the eloquent words. Nor are we restricted to spoken words. Music may be crystallized as well. Imagine an opera or an oratorio, sung by the greatest living vocalists, thus recorded, and capable of being repeated as we desire.

Mr. E. H. Johnson, an assistant of Mr. Edison, describes the apparatus as a speaking tube, provided with a mouthpiece, and a metallic diaphragm, which responds powerfully to the vibrations of the voice. In the centre of the diaphragm is secured a small chisel-shaped point. Underneath this is a drum revolved by clock-work, which serves to carry forward a continuous fillet of paper, having throughout its length and exactly in the centre a raised V-shaped boss, such as would be made by passing a fillet of paper through a Morse register with the lever constantly depressed. The chisel point attached to the diaphragm rests upon the sharp edge of the raised boss. If now the paper be drawn rapidly along, all the movements of the diaphragm will be recorded by the inden-

tation of the chisel point into the delicate boss—it, having no support underneath, is very easily indented; to do this, little or no power is required to operate the chisel. The tones of small amplitude will be recorded by slight indentations, and those of full amplitude by deep ones. This fillet of paper thus receives a record of the vocal vibrations or air waves from the movement of the diaphragm; and if it can be made to contribute the same motion to a second diaphragm, we shall not only see that we have a record of the words, but shall have them re-spoken; and if that second diaphragm be that of the transmitter of a speaking telephone, shall have the still more marvellous performance of having them respoken and transmitted by wire at the same time to a distant point.

The reproducer is very similar to the indenting apparatus, except that a more delicate diaphragm is used. The reproducer has attached to its diaphragm a thread, which in turn is attached to a hair spring, upon the end of which is a V-shaped point resting upon the indentations of the boss. The passage of the indented boss underneath this point causes it to rise and fall with precision, thus contributing to the diaphragm the motion of the original one, and thereby rendering the words again audible. Of course Mr. Edison, at this stage of the invention, adds Mr. Johnson, finds some difficulty in reproducing the finer articulations, but he is quite justified by results obtained from his first crude efforts, in his prediction that he will have the apparatus in practical operation within a year. He has already applied the principle of his speaking telephone, thereby causing an electro-magnet to operate the indenting diaphragm, and will undoubtedly be able to transmit a speech, made upon the floor of the Senate, from Washington to New York, record the same in New York, automatically, and by means of speaking telephones re-deliver it in the editorial ear of every newspaper in New York.

Some of the papers are already poking fun at the new invention.

The *Times* says that it is evident that this invention will lead to important changes in our social customs. The lecturer will no longer require his audience to meet him in a public hall, but will sell his lectures in quart bottles, at fifty cents each; and the politician, instead of howling himself hoarse on the platform, will have a pint of his best speech put into the hands of each one of his constituents. A large business will, of course, be done in bottled sermons, and many weak congregations which are unable to pay a regular pastor will be content with publicly opening a bottle of "Dr. Tyng," "Dr. Crosby," or some other popular ministerial brand, but the practice of personal preaching will be continued, since in no other way can a weekly opportunity be afforded to ladies for mutual bonnet inspection.

A writer in the *World* does not advocate the introduction of the phonograph. Suppose, he asks, when one is pouring out one's soul to one's adored and swearing to the truth of the present "first love," that some malicious person or rival should open the door of the phonograph and give one's many former tales of love in one's own voice. Suppose some adroit lawyer should amuse the judge and jury of some breach of promise trial with the exact tones, imploring, adoring, etc., of the unhappy defendant. Suppose that when one is at one's boarding-house table, expatiating upon

one's wealth, etc., the Celtic and angry tones of one's washerwoman should be heard demanding instant payment of "that little bill." Suppose all the secrets of a Washington, Albany or other lobby should be collected and reproduced to an astonished community. Suppose all the pretty meannesses of some God-like man or angelic woman should, through the agency of the phonograph, shock his or her admirers. Suppose some servant should slyly charge the infernal machine with the Caudle and other lectures of a model husband and wife. Suppose what our friends say of us should be made known to us with all the claimed exactness of the phonograph.

We are under the impression that Mr. Edison's "invention" was discovered many years ago, by an electrician in Europe, and anyway would not advise our readers to go into ecstasies over the matter, until Mr. Edison shall have developed the matter, sufficient to prove its practicability. You remember the time the press made over his "Etheric force," which eventually ended in smoke.

The Division of Expenses Settled.

The negotiations for an acceptable division of expenses between the Western Union and Atlantic and Pacific telegraph companies have at last been concluded. The conference committees appointed failed to come to an agreement, and the matter was, at the suggestion of the Atlantic and Pacific Company, left to Mr. William H. Vanderbilt as referee. He decided that the Atlantic and Pacific's portion of the expense should be 13.145 per cent.; its share of the pool being, it will be remembered, 12½ per cent. The Western Union originally claimed that the Atlantic and Pacific should bear 14½ per cent. of the expenses according to the respective showing of earnings and expenditures for the year ending July 31, 1877. The Atlantic and Pacific claimed that its share of the expense should be the same as its share in the pool. When the reports for the year ending August 31, 1877, were made, the Atlantic and Pacific's share of expense was shown to be 13.79 per cent. That company then agreed to pay 13 per cent., and at this stage the matter went to the referee. Mr. Vanderbilt, in deciding the matter, seems to have lost sight of the concession to 13 per cent. on the part of the Atlantic and Pacific, and struck a mean between the first claim of the Atlantic and Pacific—12½ per cent.—and the last claim of the Western Union—13.79 per cent. The importance of a fraction of 1 per cent. will be seen on taking into consideration that the aggregate expenses last year were a little over \$7,566,000.

Mr. Vanderbilt's decision has been accepted by both companies, and the telegraph business of the two corporations is now pooled as follows:

	Earnings.	Expenses.
Western Union p. c.	87.50	86.85½
Atlantic and Pacific p. c. . .	12.50	13.14½
	100.00	100.00

With earnings and expenses thus amicably divided, and the Western Union Company holding a majority of the smaller company's stock, we shall probably hear very little of telegraphic competition until another new company is started.

We have received a copy of the *Journal of the American Electrical Society*, which is published periodically, presumably for free distribution

among the members of the society. The present is the second number issued, and contains articles by Moses G. Farmer, Elisha Gray, C. H. Haskins, F. W. Jones, and others, illustrated by very clear diagram wood-cuts, and printed on handsome tinted paper. This, it strikes us, is a society which should be encouraged, and might make its influence felt. But, according to the treasurer's report, out of 87 members, only 46 paid their annual dues of \$3 each, and the entire receipts of the society for the year were only \$204.10, while the expenses were \$586.18. The balance should be on the other side of the ledger. Gentlemen, we regret to find fault with you, but you must economize if you want to make the society a success. We do not know the cost of the present *Journal*, but somehow fancy that \$322.15 for 300 copies of the *Journal* for 1875 was more than you could afford just at present. It was very handsomely got up, neatly printed, and the paper excellent; but until the society acquires a financial backbone, we would respectfully suggest that, as this is your greatest item of expense, the *Journal* might be got up same size, and to look very neat, at about one-half the price, by using less expensive paper, for instance. The *Journal* is not expected to be a very elaborate publication just yet. It should grow with the society. If you cannot get it done satisfactorily in Chicago, send it to this office, and we will give you an estimate.

WE want a very much larger number of operators in every part of the United States and Canada to act as agents for THE OPERATOR, LIGHTNING FLASHES, OAKUM PICKINGS, etc., this winter than hitherto. Those who are willing to assist us in this respect will please send us their names before next issue, and also say how many extra copies of the issue [of December] 1st they can use to good advantage in the way of securing new subscribers. The issue of THE OPERATOR for December 1st will contain 16 pages, and a specimen copy of it will be sent to every Western Union and A. & P. office in which we have not already subscribers. About all that agents will therefore find necessary will be to ask the operators at each office they work with whether they have received a copy of the paper, what they think of it, and to send their subscriptions to them. We depend upon each one of our readers doing all they possibly can for us in this respect. Personals, etc., for Dec. 1st issue are solicited.

Premiums for Clubs.

As a specimen copy of THE OPERATOR for December 1st is to be sent to every Western Union and A. & P. office in the country, we hope all our present readers will embrace the opportunity of doing what they can toward increasing our subscription list. To encourage them in the good work we offer the following liberal premiums for clubs:

For 2	Yearly Subscriptions, One Pack of Visiting Cards and Engraving of Prof. Morse.
" 3	" " " Copy of "Oakum Pickings."
" 5	" " " Copy of THE OPERATOR, 1 year.
" 7	" " " Copy of "Lightning Flashes."
" 9	" " " "Lightning Flashes" & "Oakum Pickings."
" 15	" " " A First-class Learner's Outfit.
" 30	" " " A Splendid Nickel-Plated Relay.

Sparks.

It was a backward debtor who said: "The dues you say."

Sweet remark by the Graphic regarding Keely—"Let us hiss him for his motor."

A stuttering professor says: "The Dog Star is no star at all. It is a p-p-p pup-planet."

Dick Turpin used to say: "Your money or your life." The present highwayman says, "Lend me a quarter."

Photographer—"Now, sir, if you will look a little less as though you had a bill to meet, a little more as though you'd been left a legacy, you'll get a picture."

"O, for some new-coined name by which to call him! O, for some name no other lips could give!" was the prayer of Violet Fane until she married him. Now she is content to call him Old Beeswax.

A regular Hercules is brought up for aggravated assault. The court: "Have you any one to defend you?" Prisoner (picking up a chair): "I can defend myself. Come on, all of you." (Cleans out the courtroom.)

The Chinese have abolished the only railroad they had. They are probably in favor of rapid transit, and have concluded to walk, hereafter. It is provoking, when a man is in a great hurry, to be obliged to get off a train and hurry ahead on foot.

A German-American patriot returning to the old country shed tears as his adopted land faded from his view. "America es der best goundry in der world," he remarked. "I haf vailed dree dimes, and I now leaves it to spend mine vortune mid mine family."

First friend (poor)—"Will you do me a great favor?" Second ditto (rich)—"With pleasure, but first you have it in your own power to render me a great service. Will you?" F. F.—"With pleasure. What can I do for you?" S. F.—"Don't ask me for any money."

"Musing on the infinite eh?" exclaimed a facetious chap to a melancholy-looking individual who was walking along the roadside with bowed head and serious looking countenance. "Well, yes; same thing—thinking of my debts."

He smoked. He drank. He even lived fast. Seldom went to church. Was at times profane. But he's not in State Prison and his reputation is A 1.—Graphic. Are you never to have done talking of yourself? Don't you know that this takes up the reader's time.—Courier-Journal.

When a bashful young man undertakes to carve a turkey at a table where there are several strange young ladies, it is only a question of time—and a very short time at that—which lady gets a leg of the fowl in her lap, and which of the guests receives a dab of "stuffing" in the eye.

"Is he a good doctor?" asked one gentleman of another, speaking of an acquaintance. "Well, people call him so," replied the other; "but as far as my experience goes, if I was a patriotic man, and there was going to be a long war, I should like to have him in charge of the enemy's wounded."

Both won.—The young man who would take the most girls to the Grand Rapids Fair was to be awarded a suit of clothes. Edward Cox took sixty-five girls and won the suit. We printed the foregoing item the other day, and now comes another young Michiganian saying he took only one girl, and won a suit, too.

You may preach to your friends that philosophy will enable one to not only stoically endure the various ills of life, but sometimes make them a source of pleasure. Pause a moment. When you get a seat at the theatre behind a man who talks through his nose and interpolates the play with explanatory remarks to the gentleman beside him, who has an ear with a broken hair-spring, where's the reasoning process that can keep you from feeling an almost irresistible desire to strangle him?

The oldest female on record—Ann O. Domini.—N. Y. Weekly. Not so. Ann O. Mundi aunty-dates her.—N. Y. Com. Adv. O, pshaw! Neither of them were there when the world Big Ann.—Syracuse Standard. Ann Ticipate was around before that.—Port Chester Journal. Say, let's have a change, Give the old man a chance. The oldest man on record was Man Kind, of course.—N. Am. Review. Of course he wasn't. The Man in the Moon came before him, and immediately got "high."

Two Minutes Too Late.

With his good-by ringing in her ears, Drucie Miller re-entered the little telegraph office, and dropped into the chair before the little clicking instrument. Glancing at the clock above her head, she noticed that it was almost time to close the office for the night, and seek her humble home at the foot of one of the darkest streets in the village. The rumbling of the train which had just left the station was growing fainter and fainter, and the girl listened to it as though it was the voice of a friend who was leaving her for a long time.

She did not expect any more messages that night; the engine breathing heavily from its great iron lungs on the track near her window would not move until the night express had passed up, and the engineer knowing this, had sought his sweet-heart, who lived in the village.

Tom Gray, the engineer of the train departing, was Drucie's lover, and his intimate friends knew when the wedding was to take place. He had not known her long, but that did not matter, as he was a true fellow, who loved her with all his heart, and with all her's she loved Tom.

The rumble of the train at length died away, and she was about to shut off the current and leave the office, when a message began to fall upon her ears.

She started, for the first word drove the color from her cheeks, and standing over the instrument she heard this message:

"Number ten switch at Colby until number six passes. Six just starting."

"Six just starting! My God! They will meet!" cried the beautiful operator, starting from the table; "what can I do to save him—them?"

And with her eyes staring at the clock she stood in the center of the room, thinking of the two trains approaching each other through the mist that almost hid the moon.

The real situation, enough to blanch a young girl's cheeks, was appalling.

The order for the train which had just left Fletcher to switch at Colby, could not be obeyed now. The telegraph, even, could not stop it, for there was no night office at Colby. It was an unusual matter for number six to leave Fort Wayne before the arrival of number ten; but as the latter train was some twelve minutes behind time on that particular night, six, anxious to leave on time, to save its connections, telegraphed to Fletcher the message which had so startled Drucie Miller. From a point four miles below Colby the company had completed a double track, which, when finished to Fort Wayne, would obviate the trouble of switching and preventing accidents.

When Drucie recovered her self-possession, she started from the office with the message in her hand. It had arrived just two minutes too late, and Tom Gray, unconscious of its existence, was driving his engine ahead and thinking of the girl he had lately kissed adieu. He knew that it was known in Fort Wayne that he was unavoidably behind time, and thought that according to custom, the express waiting there would not move until he arrived.

But let us return to Drucie Miller.

She saw the freight engine standing on the new track already mentioned and caught a glimpse of the young fireman asleep on his box.

A determined resolution entered her head and the next moment she was in the engine-room with her hand on the boy's shoulder.

"That you, Miss Drucie?" said the boy, rousing him self with a yawn. "Love's a mercy!"

"Get out and uncouple the freight!" she cried. "Tom's moved out, and if he doesn't switch at Colby everybody will be killed. We must catch him!"

The boy with a cry of horror left the engine, and a minute later, the freight cars were standing idly on the track while the engine and its tender were moving out, gaining momentum at each revolution of the wheels.

"What'll Dick say when he comes back and finds his engine gone?" said the boy, looking up into Drucie's face.

"What do we care what he says? What is

Dick's life to the precious lives on the two trains? Jim, how fast can your engine travel?"

"About two miles a minute!" the boy answered, with a smile. "She's the swiftest bird on the road. But I don't think we can catch number ten; we might if we had Dick with us. He knows how to manage the Belle."

"And so do I. Wood up, Jim? Fill the furnace chock full. We must catch Tom this side of the new track's terminus or——"

The girl paused and looked at the pale boy.

"Or what, Miss Drucie?"

"Or blow up!"

"That's what's the matter!" said Jim, catching her spirit. "And we'll catch him, too! Wood! wood! There! the furnace is chock full. Golly—whiz! how we are going!"

Drucie smiled faintly at the boy and noted the hand of the gauge. The engine had received new momentum which momentarily increased, and all at once, Jim, who had been trying to pierce the haze, said:

"Two miles a minute, I'll bet, Miss Drucie! If it were daylight the telegraph poles would resemble a fine-tooth comb."

But the girl did not reply. She stood before the lever, wishing that she could urge the engine to greater speed. She had calculated that the two trains would meet in a gulch that embraced a curve six miles from Colby. It was a terrible place for collision, and the loss of life there would be great. The haze or mist would prevent the engineers from signalling each other, and a collision was inevitable.

The engine, which seemed to have broken loose rushed madly on, with Jim looking at Drucie whom he was inclined to believe mad. The cold mist, slowly turned to a drizzle, was occasionally blown against his face by the wind; it served to cool his heated temples, and to make him think calmly of his situation and the folks at home.

So fast were they moving, that they seemed to glide over the rails, scarcely touching them in the mad career, and when Drucie told Jim to listen for the sound of Tom's train ahead, the boy poked his head out of the window and held his breath.

"Pears to me I hear a sound," without turning his head. "Mebbe I'm mistaken—so many things 'pear to me just now."

"Thank God!" ejaculated the girl. "Listen with all your might, Jim. Oh, for the speed of a bullet!"

Her face was glowing with heat, and while Jim listened she opened the furnace door and threw in the last sticks of wood they possessed.

"The wood's gone, Jim. How far yet can we go at this rate of speed?"

"About fifteen miles," the boy answered—"twenty of them if we must do it."

"Then we'll catch him. Colby must be nine miles away yet, and the gulch is six miles farther on—fifteen miles! Jim, can't you hear him yet?"

"No; guess I was mistaken awhile back," the boy said, and Drucie's countenance fell.

"There's the sound again!" "Listen for yourself, girl."

Drucie went to the window and put her head out.

"That's Tom!" she cried, "Oh, heaven, let me save him and all the other precious lives to-night!"

With this prayer she turned to the furnace and smiled at the red-hot doors. The engine and its empty tender seemed to fly over the track, and when Drucie looked at Jim again, she found him staring at the gauge.

"What's the matter, Jim?" she asked.

He came forward with hand extended toward the little instrument.

"A little more fire and we'll blow up!" he gasped.

"Tom would hear the explosion and stop his train. That might prevent the collision!" was Drucie's reply.

It was now evident that the sound ahead was that of Tom Gray's train, and the girl prepared to warn her lover of his danger. The tracks were quite close, and she told the fireboy to watch the machinery while she attended to that part of the

warning work which she had allotted to herself. With pallid face and almost throbbless heart she took up her station at the window, heeding not the drizzling rain that beat into her face, and awaited the decisive moment.

The sound of the train on the other track grew momentarily more distinct, and the daring girl fancied that she heard number six coming through the valley below Colby.

"Yes, it's Tom!" she cried to encourage the boy at the lever. "I see his light. Now!"

Then she leaned out of the window, and shouted at the top of her voice:

"Switch at Colby! Switch at Colby! Colby, six! Colby, six!"

Many times she repeated her cry, and all at once she dashed by the heavy train!

Right into her lover's face as he leaned from his engine, she shouted "Switch at Colby!" and heard the shrieks that told her that he would obey.

"Saved! saved, Jim!" she cried, with joy, turning upon the breathless boy, who already was checking the Belle's speed.

"Golly—whiz! Drucie, they ought to give us a train!" he said, laughing. "If we can ever stop the Belle, we'll go back; but the girl's got her spunk up, and would run on forever!"

Drucie Miller returned to the window with a heart filled with thankfulness, for Tom had heard and was already running on to the switch at Colby.

After awhile the Belle was got under control, and backed with lessened fires.

"Listen!" suddenly cried Jim.

"Yes, number six is coming; but we don't fear her now!" said Drucie, with a smile. "Tom and his passengers are safe on the switch!"

The next moment number six dashed by, and Drucie laughed and actually clapped her hands.

The meeting between Tom Gray and his love can not be described.

"Your head-light seemed a meteor," he said to her; "and I knew your voice—I don't know why. I guess you made time coming down."

"Time!" cried Jim; "I don't think the wheels touched the rails more'n half the time. If it had been day, the milestones would have looked like a rake."

There was a laugh at the boy's exaggeration, and when Tom took Drucie aside, he kissed her.

It was not the only kiss she got that night, for all the women on the train kissed the girl who had saved their lives, and Tom Gray said he wouldn't get jealous when the mustached passengers bent over Drucie, blushing like a rose.

The story of Drucie's feat crept into the papers, and, though my story may be old to some of my readers, I believe it will bear repetition.

Dick Lambert forgave Drucie for running away with his engine, and Jim, the fire-boy, never grows weary of telling about that "run."

Tom Gray is still on the road, but Drucie does not listen to the click-click of the sounder any more. Every night at eight she holds a little boy up to the window, and he cries "Papa!" and claps his little hands as an engine dashes by.

It seems that ex-President Grant travels free on the English railroads. When he arrived at the railway station at Stratford-on-Avon a few weeks ago, the General, his secretary, and Mrs. Grant were about to leave the platform when one of the officials of the Great Western Company demanded their tickets. "Tickets! Nothing of the kind had been heard of before in England by the party. Well, the station-master felt himself in a difficulty, for he had received no instructions to treat the travellers exceptionally; he would telegraph to London for guidance. With this understanding the party passed into the town. Upon their return to the windy little station, they learned that the reply from London was that His Excellency and party should pass free. What a sensation the English people have missed. Fancy the placards of the morning papers with "Arrest of President Grant at Stratford-on-Avon for defrauding a railway company. General Grant bailed by the Mayor of Stratford; Mrs. Grant by the Lady Custodian of Shakespeare's house. The secretary still in prison." Its a great convenience to be an ex-President when one's abroad

The Telephone.

The *Glasgow Herald* in giving an account of some experiments with the speaking telephone which have been made in Sir William Thomson's Laboratory at the University, records the following among the number: "A third interesting experiment made yesterday was that of sending 'Should Auld Acquaintance be Forged' through the too solid flesh of twelve persons, who entered the circuit and joined hands, an enormous resistance being in this way created. While they were electrically connected, Professor Bell, in the upper floor of the university, sang a line of the old melody, which floated into the ear of the member of the circle who applied his organ to the mouthpiece, and was also faintly heard by the other persons in the laboratory." We have always believed that the Scotch manifested a passionate fondness for their national songs, and especially "Auld Lang Syne," but we never thought they would carry it so far as to have the favorite melody sent through them." This spectacle of a dozen patriotic, but bulky, Scotchmen is too affecting.

Like other marvellous things the telephone seems to have established quite a literature of its own. The comic papers have employed it as a vehicle for their wit, and especially for that of a rather far-fetched description. Poets have eagerly welcomed it as a new image, and there have not been wanting preachers who have hailed it as a new symbol. It has been the theme of a great deal of amusing speculation, of which it is difficult to distinguish just from earnest. For instance, the *Herald*, above quoted, goes on to say: "In America, at Boston and Cleveland, Ohio, dwelling houses and places of business are connected by the telephone with a central office. Merchants talk with each other without the intervention of third parties, and therefore in perfect secrecy. Or Brown telephones his wife that he is going to bring Jones and Robinson to dinner at five o'clock to-day, and Mrs. Brown communicates with the central office, directing the attendant there to put her in communication with Brisket the Butcher. Her house is straightway switched on to the butcher's shop, and a joint is ordered. In the same way Mrs. Jones may make known her commission to the green-grocer or the wine merchant. It is further intended to have the far distant cities of the new world placed in telephonic communication with central offices, where a merchant may buy the use of a wire for five, or ten, or twenty minutes, as he desires."

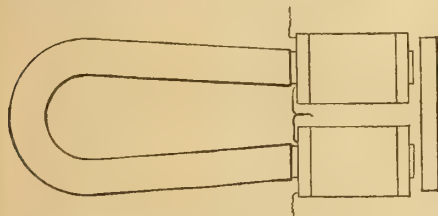
Scientific Department.

[This department is under the charge of Mr. H. Van Hovenbergh, 145 Broadway, to whom all communications relating thereto should be addressed. Mr. Van Hovenbergh will cheerfully answer here any queries pertaining to electricity, magnetism, or kindred subjects.]

INDUCTION.

III.

In Art II. the "shocking" machine is shown as usually constructed, with the electro-magnet detached from the steel, or permanent magnet. It is not necessary that it be arranged precisely in this manner. The spools or helices may be attached to the poles of the horse-shoe magnet, and the yoke (or armature, as it then becomes) made removable, as in this engraving:



Should this armature be revolved, as the electro-magnet was in the first instance, the same effects would be produced. As the revolution of the electro-magnet (or armature) is merely a convenient method of approaching it to, or withdrawing it from, the permanent magnet, any other manner of accomplishing this object would answer fully as well. If the armature be moved to and fro in front of the electro-magnet, by hand, a current would be induced in the fine wire surrounding the cores by each movement. It might require an extremely delicate galvanometer to make its presence manifest, but it would be there, nevertheless.

Suppose two sets of apparatus like the one shown

above were provided, with the armatures mounted upon pivots, like relay-armatures. In other words, suppose that the yokes were removed from the helices of two relays, two horse-shoe magnets placed in their stead, and the relays connected by wires.* If the armature of one of the relays be allowed to approach the cores of its electro-magnet, and then suddenly pulled back, the armature of the other relay will make the same movement. The reason is, of course, obvious. The movement of the first armature induced a wave of electricity in its helices, which traveled along the wire, and, reaching the other electro-magnet, caused it to attract its armature momentarily. It is plain that it makes no difference which armature be touched, as, the conditions being the same in both relays, the other one will always respond.

If iron plates be substituted for the armatures, and rigidly fixed very near to the cores, the connections are in nowise altered. Even the slightest vibration of one of the plates will be communicated to the other, as explained above, and its vibrations will be in exact proportion to the wave induced, the strength and duration of which depends upon the impulses given to the transmitting plate.

As all sounds consist of vibrations, if one of the plates be made to assume the vibrations necessary to produce a tone of the voice, the other plate will be made to vibrate in precisely the same manner, and setting the air in motion, the same tone will be heard at the further plate.

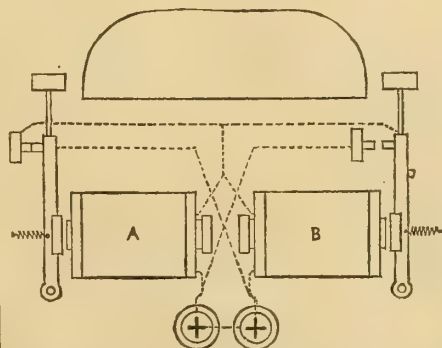
The course of the tone, and its various transformations, might be traced as follows:

The air, being set in motion by the throat and mouth, impinges upon the iron plate and causes it to make certain vibrations. These excite waves of electricity in the wires surrounding the cores of the helices. The waves travel along the wires, and reaching the further electro-magnet, act upon its iron plate, attracting and repelling it, and producing the same vibrations as the transmitting plate, but with less force, as the current or wave is weakened by the resistance of the line wire. The plate, vibrating in its turn, sets the air in motion, producing its particular tone, which is received upon the drum of the listener's ear. A word, spoken against an iron plate, is distinctly heard a hundred miles away.

Thus simple is Professor Bell's great invention. It is regarded, and rightfully, as one of the greatest marvels of this wonder-producing century.

ELECTRO MECHANICAL MOVEMENTS.

No 9.



A double vibrator. The two magnets are placed in the same circuit, and each lever arranged so as to cut out the opposite magnet.

Its operation is as follows: Upon the battery circuit being closed, magnet A attracts its armature, inflicting a blow upon the bell, and, as it leaves its back contact, placing magnet B in circuit. B then attracts its armature, its hammer strikes the bell, and, reaching its front contact, cuts out magnet A. The lever of A then falls back, cutting out magnet B. The separation of the points of lever B places A again in circuit, and the whole operation is repeated indefinitely.

* It must be understood that no battery whatever is used in these experiments.

The Penn. R. R. wires which used to cross the North River at 60th Street, were changed in the latter part of October to cross at Cortlandt Street, saving several miles of wire and much annoyance from interruptions.

Washington Notes.

Telegraph matters are quiet at the National Capitol. Nearly all the old men, who have been away during the past summer, have returned to their posts. Hotchkiss has gone on the night force for the present. Ed. Stewart is at his old place at the Capitol. Bickford has resigned the management of the A. and P. office, and accepted a Government position. Mr. Bugbee taking the place vacated by Bickford. Amos Adams has resigned as manager of the A. and P. office at Richmond, Va., and been appointed night manager for the same company here. The A. and P. office at Alexandria, Va., has been closed. Mr. S. S. Bogart, of New York, is here on his wedding trip. He looks well and is evidently enjoying himself. "Fat Jack," our "red hot conservative" took French leave of us a couple of weeks ago, and unexpectedly turned up in New York. He returned after a couple of days absence, saying that he only wanted to make a break in the monotony of the office. Jack does not often give us a sensation, but came near it that time. Supt. Merrihew and Mr. Gill of Philadelphia were in the city last week. They said nothing about our new office, though. Some of the branch offices of the W. U. which were closed, have been reopened, including the Arlington House, Ebbitt House, Riggs House, and an office at the navy yard. Ed. Falconer, formerly at the Ebbitt House, has joined the Signal Corps. E. H. Johnson, of your city, gives a telephone concert in this city on the 16th inst. A. L. Childs, an old and well known operator of this city, has been appointed chief clerk of the Government Printing office, under the new Government Printer, Mr. DeFrees. Al. is a fine fellow, and we are all glad to hear of his merited promotion. The Washington members of the Telegraphers' Mutual Benefit Association have elected Mr. W. H. Young, of this city, as delegate from this district to the convention to be held in New York on the 21st inst. Mr. Young was the delegate from this district last year, and no doubt will sustain his reputation at this convention. This agency is in a first class condition, and will compare favorably with any agency represented. We have a membership of thirty-four and have had two deaths so far. We have no delinquents. One of the oldest telegraphers now living resides in this city, Mr. Lugenbiehl, father-in-law of Senator Christianity, of Michigan. Mr. Lugenbiehl was one of Professor Morse's students, and worked on the experimental line erected between Washington and Baltimore by Professor Morse, with the aid furnished him by Congress. Paul D. Connor, our veteran line man was also employed on the above line and at the same time. Mr. Connor moved the office from the Capitol to the corner of Seventh and F streets, which was the first office opened for commercial business. Connor gives an amusing account of the discovery of the earth current. There were two wires from here to Baltimore worked in a metallic circuit, copper wire, insulated by means of rags and pitch. One of these wires became broken, and both ends fell into the water. Of course there was a good circuit at Baltimore and Washington, though the professor knew the wire was broken. He undertook to test it, and accompanied by Connor took a spare magnet the size of a nail keg, which was made by a blacksmith, and after reaching the break, connected the magnet on each side of the river and got good current, being able to work from the break to both offices. Professor Morse was greatly puzzled by this state of affairs, but finally resolved to utilize his discovery and study out the theory afterward. This, of course, gave him two wires to Baltimore, instead of one.

Albany, N.Y., Items.

"Typo" by an error in punctuation made us say in our last issue, that Miss Grant had been retained in charge of the consolidated offices of the Gas Light Co., the Water Works Co., and the Western Union, and Atlantic and Pacific in the Lumber District, which is not the case, she having charge of the telegraph only. But we forbear, imagining that we hear "typo" say, "just as he sent it." All the boys deeply sympathize with Assistant Chief S. C. Rice, of the Western Union, in the loss of his father, who was fatally burned by the explosion of a lamp, at his residence in Harlem, last week. Mr. George Lounsbury, of the Western Union, has returned to his studies for the winter at the New York Medical College. All join in wishing him the best of success. We echo the sentiment of the following clipped from the *Albany Argus*: Mr. F. L. Fancher, of the Western Union Telegraph office,

has been engaged as organist and director of music at the First Baptist Church in this city. Mr. Fancher was formerly organist of the First Presbyterian Church, Lausdungh, and although a young man, is not without experience, and will undoubtedly prove a valuable acquisition to the musical talent of Albany. It gives us pleasure to record the marriage of Mr. Henry Mack, night operator at Greenbush, to Miss Harriet L. Haight, of the same place. Mr. Mack has many friends on this side as well as over the river, who will join with us in wishing the new couple many years of happiness. Mr. Perry Chamberlain, of the N. Y. C. R. R. office has been discharged, and M. Allen re-instated in his place. *Gibb Fowler* for Mr. B. B. Fowler, will do, but "two folders position" for two fold opposition, by the report man is better. X.Y.Z.

Obituary—William C. Buell.

We had barely time to announce on Saturday the death of William C. Buell at his residence in West Troy on the morning of that day, the 3d inst. The intelligence was a sad surprise to most of Mr. Buell's friends, who were not even aware of his illness. He was universally respected; few men have had more cordial and sincere friends in any community. Mr. Buell came to Troy in 1847 from East Bloomfield, Ontario county. He was then just entering into manhood. With his brother-in-law, Mr. Carter, he opened in the then new Athenaeum building the first telegraph office in Troy. The telegraphic system was then new—to most people it appeared as a miracle. Intelligence was communicated very slowly over the wires. Great patience and not a little ingenuity were often required to secure anything like satisfactory results. Mr. Buell soon became a telegraphic expert. He grew up with the system; he contributed to its advancement. He became superintendent of the New York, Albany and Buffalo division of the line. It was in the field of telegraphic science that he achieved his most successful life work. Mr. Buell possessed a genial nature; he impressed his amiability upon others. Dealing with business men, and often with their vital interests in connection with telegraphic work, he won their confidence and made life-long friends. He left his profession some years ago and entered into other pursuits. He was engaged with his son in insurance and real estate brokerage business from that period until his decease. Mr. Buell had pleasant words and a sunny smile for all. He possessed a warm heart and a loving nature. He was most happy in serving friends. He was self-sacrificing, and delighted in doing good to others. He entered heartily into the support of enterprises for the uplifting of the downfallen, and to help the deserving. He was an upright man, tenacious in his friendships, fervent in filial affection. A wife (daughter of the Hon. Frederick Follett, formerly canal commissioner), and three children survive him. Many, many friends will condole with them in their great affliction, and sincerely mourn the loss of their early companion and steadfast friend, William C. Buell.—*Troy Times*, November 5th.

Chicago A. and P. Gossip.

Mr. H. M. Scott, who for some time past has been night manager of this office, left us last week to fill the managerial chair of the Milwaukee (A. and P.) office. Mr. Scott is an excellent electrician, and will doubtless discharge the responsible duties of his new position with credit to himself and profit to the company. Mr. Samuel G. Ramsey, one of the most reliable and expert operators in Chicago, has been appointed night manager, *vice Scott*. A better selection could not well be made. Sam is thoroughly familiar with the duties of the position and, besides, possesses the no insignificant merit of being decidedly popular with the "boys." Mr. J. Quelch, a subject of "H. B. M." from Montreal, is "all night man," *vice Sam Ritchie*, who has followed Greeley's advice and gone West. Mr. J. M. Quigly, the latest addition to the day force, wrestles one side of the Buffalo duplex. Mr. J. D. Cameron, a young and promising artist, lately of this office, is now "hooping 'em up," in the Produce Exchange office, Milwaukee. Tom Fagan has gone Southward. E. F. Gould, formerly chief operator at Washington Heights, Ill., has been transferred to the night force. Mr. Gould is a very fine poet. His style is peculiarly his own. He promises to shortly favor the readers of THE OPERATOR with some of his productions. Now is the time to subscribe. Mr. W. A. Wherry has resigned and gone into the laundry business, which he considers wherry much better than tele-

graphing. Mr. Samuel J. Smith, Jr., a gentleman well and favorably known to the profession, and formerly the efficient manager of this office, is, we understand, with the W. U. here. Sam has hosts of warm personal friends who doubtless will be pleased to hear of his continued prosperity. "May his lines be always cast in pleasant places." A brand new plug switch, "with all the modern improvements," now adorns our office. Four new quartette tables have also been put up. These facts may be devoid of any particular significance, but it is rumored that the A. and P. has "gobbled" the W. U. in this city and that it is proposed to consolidate the offices. As this office is much larger, more elegantly finished and in every way better adapted to the purposes than our neighbor's over the way, it is presumable that in the event of such a change this will be the office. The creation of ten or a dozen more "corporals" would then be imperatively necessary.

Jottings from the Oil Regions.

OLDOM PENNA., Nov. 12th.

This section being seldom heard from through your columns, I will, provided this passes the waste basket, give your readers a short sketch of the country wherein the W. U. has a bonanza. To commence at the extreme end of the upper oil country, we first strike Titusville, the town of mortgages. At that place we find as manager one of the most popular and gentlemanly men in the service, M. E. Luce, with Messrs. Chase, Farwell, Ward, the copper plate-man, and Ellison, report man, as assistants; M. E. Luce also holds the management of Oil City, and Frank Ross as chief operator, and Messrs. Talbot, Coulter, Skelly, Miller and several new-comers unknown, as assistants. At Emlenton a brother operator would be cordially received, by manageress Miss Corey, with a polite request to walk in—and take off your hat. At Foxburg, L. L. Jeffords is manager—of himself and the messenger. Skipping up a 500 foot hill you next land at St. Petersburg, or as Eitemiller says, they all send it 6 Cetersburg. Here you find S. M. McKee as manager, with H. H. Mobley assistant. At Parker, the rival of Oil City, M. R. Wolfe plays the heavy role with Pete Brigham as chief, W. J. Hunter, an old timer, as book-keeper, and Simpson, Kearny and Dunn, assistants. This office during the past few years has employed a number of the celebrities, John Moreland, Paul Bossart, Jim Coulter, Pete McKeever and Eitemiller, of course everybody knows Eite. The writer has not seen him since the Parker Races, to inform him that the "steer" he gave me cost me a double X. The last town of importance is Petrolia, which office is presided over by R. W. Purdum with two assistants.

Ah! Thank You.

MR. EDITOR, Enclosed, please find my renewed subscription. I have learned to love THE OPERATOR, and shall henceforth be a constant reader of its newsy columns. All I hate about it is, that I do not get it every day, instead of every two weeks.

I wish I could say something that would be entitled to a place in its bright columns, but I am yet very young in telegraphy, and the knowledge of that fact discourages me. However, that THE OPERATOR may ever continue, as it now is, to be the pet of telegraphers of both sexes, that the number of its readers may increase a hundred fold, are the sincere wishes of

DAISY.

Dashes Here and There.

The Rothschilds think that, in an emergency, they could advance \$25,000,000 on short notice. Since the sliding scale, the average walter of the electric fluid feels as if he would require at least thirty days notice to advance such a sum—and then might possibly be a few dollars short.

We've often heard and often read
About a conversation's thread;
But now-a-days it may be seen—
The one I saw to-day was green;
It carried many a word and tone
From telephone to telephone.

Ah! Science give us one more link,
That we may hear our neighbors think.

—[Providence Journal.

The average telegraph editor is wearing out the knees of his pants praying that there won't be a war in Afghanistan. Kelatkekkhatulatoetnfentoekan is the name of one of the native generals, and if that doesn't lay the Bulgarian atrocities in the shade may we be everlastingly hornsoggedled.—*St. Louis Journal*.

A Burlington man has invented an umbrella, the handle of which is made of a section of the best lightning-rod material that is known to science. The owner of the umbrella holds a glass insulator in his hand, in which the end of the umbrella is inserted when he carries it. When he puts his umbrella down at the post-office or church, of course he puts the insulator in his pocket, and the man who walks off with the fatal umbrella is struck by lightning before he gets ten steps from the door.

PERSONALS.

A. A. Hatch, formerly of Chicago, has been subbing at Lisbon, Iowa, during October.

Frank Beane, of Goshier, Indiana, is the latest addition to the C. and N. W. force at Council Bluffs Iowa.

L. C. Fritts, operator at Sabula, Iowa, has resumed work after a month's pleasant vacation "in the far east."

Mr. J. E. Wolcott is manager of the A. and P. and operator, B. and O. R. R. at Tunnelton, West Va.

Mr. John Langstaff has resigned his position with the G. T. R'y, at Morrisburg, Ont., and accepted a position at McComb City, Miss.

A correspondent informs us that there is a letter at Rigolets, La., for Mr. J. C. Hennessy, late of Crystal Springs, Miss. If any one of our readers know Mr. Hennessy's whereabouts, will they please let him know.

Will any one knowing the present address of George C. Farrington, formerly of Corning, N. Y., but more recently operator Atlantic and Pacific R. R., Atchison, Kansas, please send same to C. A. Schleffer, Elmira, N. Y., and oblige.

Sunday afternoon, two weeks ago, a man named William M. Brook, claiming to be a telegraph operator, jumped into the lake at Central Park, intending to commit suicide. The wetness of the water and the coldness thereof combined to weaken his resolution, and he swam ashore. He was taken to the station house.

The Maple River branch of the C. & N. W. R. R., running north from Carroll to Mapleton in Western Iowa, is now completed and in running order. This branch is sixty miles long, has eight stations, and seven telegraph offices. Running through the most productive portion of the State, hitherto isolated from any railway, an immense grain traffic is expected. Mr. A. F. Briggs, for the past few years operator for the Northwestern Company at Council Bluffs, will have charge of the transfer station at Maple River Junction. J. W. Davidson, formerly of the train dispatchers' office at Boone, fills the vacancy at Council Bluffs caused by Mr. Briggs' resignation. Fred. E. Cheney, an old freight conductor for the same company, takes charge of Wall Lake station, sixteen miles north of Carroll.

MARRIAGES.

WILKINS—FEGAN.—At Clinton, Iowa, Saturday evening, Oct. 27, at the residence of the bride's parents, Mr. Ben. C. Wilkins and Miss Bessie Fegan.

Mr. Wilkins is the popular manager of the Western Union Telegraph Company at Clinton, and his bride one of the fairest and most accomplished of Iowa's daughters.

SEARS—ZAKNEN.—Oct. 19, at Piecho, Nev. Mr. Jos. L. Sears, Manager, Western Union Telegraph Company, to Miss Gertie Zaknen.

BIRTHS.

Oct. 30, At Duncannon, Pa., to William E. Miller, Manager, Western Union Telegraph Company. A son.

DEATHS.

HILLS.—Oct. 27, at Summit, N. J., Imogene Colby, wife of Mr. M. B. Hills, Manager, Western Union Telegraph Office, Washington Market, New York.

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and upward, \$1.40. No. 6. For Gentlemen of moderate strength,
\$1.50. No. 7, \$2.00. Complete set of seven, \$9.00. No. 7 is
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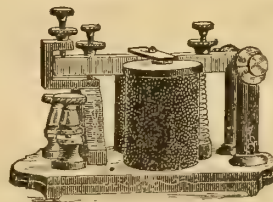
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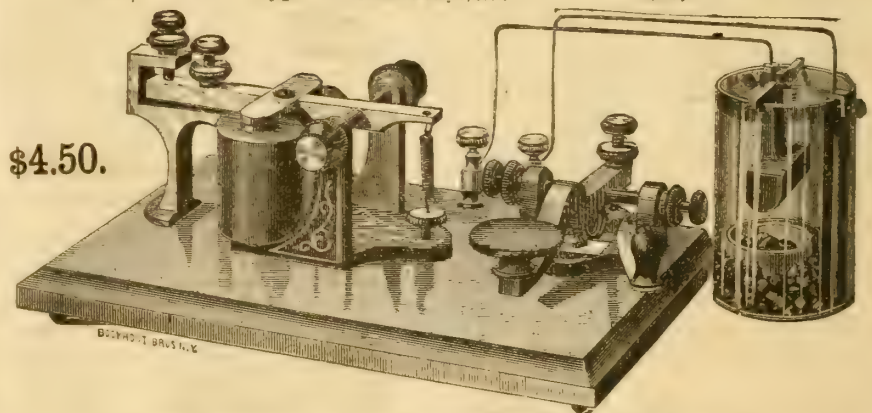
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VOL. VIII.

NEW YORK, DECEMBER 1, 1877.

No. 7

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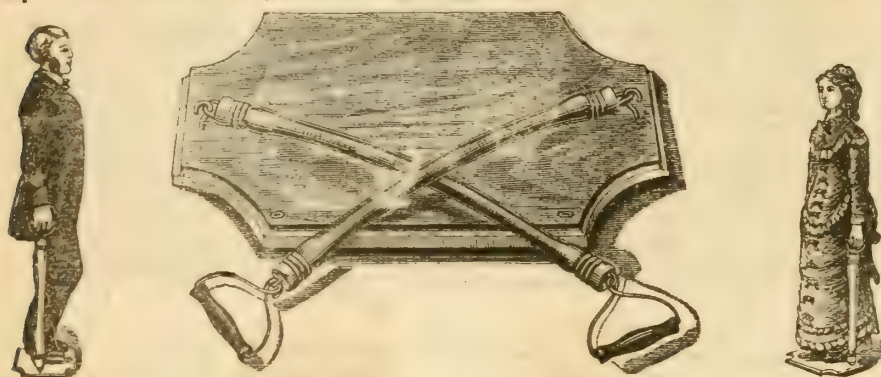
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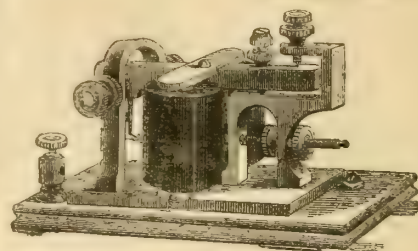
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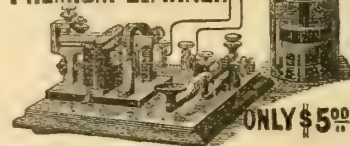
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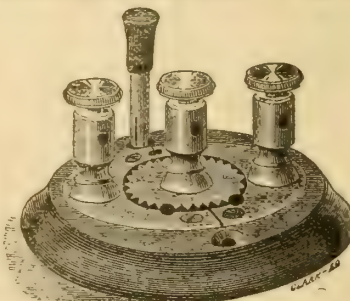
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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

December 1st, 1877.

Volume VIII.

Whole No. 91.

To John Oakum.

I've read with keenest gusto, John,
Your "Pickings" through and through,
Your sketches are indeed well drawn,
And to the life most true.
No 'prentice hand could e'er have wrought
Such smoothness, strength, and grace,
And now I turn again, friend John,
To read your pleasant face.

I'll tell you what I read therein,
(It cannot make you vain,)
There's fancy, mirth, and stingless wit
Which sparkles like champagne.
Thought sits enthroned upon your brow,
Its purpose deep, refined,
And underlying all, friend John,
I see a noble mind.

True merit wins; although the world
May now withhold due praise,
There's surely comfort in the thought
It will come in after days.
The time is not far distant when
The world will doubtless find
That in the race for fame, friend John,
Our craft's not left behind.

Methinks Fame's laurels will, ere long,
Adorn your manly brow;
And you have cause to feel that Fate
Is smiling even now.
Don't fly the track nor be "switched off,"
But let your head-light shine—
You wield a facile pen, friend John,
Ah, would that it were mine!

ALAN (J. A. AULLS).

Professor Bell's Telephone.

The speaking telegraph, or telephone, has now passed the experimental stage, and is in daily use for commercial purposes. There are two forms of telephone. One of these, Professor A. Graham Bell's, has of late been simplified in construction, and consists now of but three metal portions, contained in a casing of wood or light hard rubber, but five and five-eighths inches in length and two and seven-eighths inches in diameter at the enlarged end. This telephone differs from all others, as it does not involve the use of a battery.

The simplicity of the construction is clearly shown in the accompanying engraving, in which both sectional and exterior views of the device are given. Referring to the sectional view, A is a permanent magnet, held by the screw shown in the rear. Around one end of this magnet is wound a coil, B, of fine insulated copper wire (silk covered), the ends of which are attached to the larger wires, C, which extend to the rear and terminate in the binding screws, D. In front of the pole and coil, B, is a soft iron disk, E. Finally the whole is inclosed in a wooden casing having an aperture in front of the disk, and which, besides serving to protect the magnet, etc., acts somewhat as a resonator.

The principle of the apparatus may be summarized as follows: The influence of the magnet induces all around it a magnetic field, and the iron diaphragm, E, is attracted toward the pole. Any alteration in the normal condition of the diaphragm produces an alteration in the magnetic field, by strengthening or weakening it, and any such alteration of the magnetic field causes the induction of a current of electricity in the coil, B. The varying strength of this induced current is dependent upon

the rapidity of the vibration of the disk, and this depends upon the air disturbance made by the voice in speaking. Therefore, first, a wave of air throws the diaphragm into vibration; second, each movement produces a change in the magnetic field; and third, an induced current is generated in the coil wire. Now if to the binding screws wires be attached, communicating in like manner with an apparatus similar to that described, it is clear that an induced current will pass through the second telephone thereby modifying the strength of its magnet, thus increasing or diminishing its attraction for the diaphragm. Hence every vibration made by the first disk is repeated by the second, and whatever sound produces the vibration of one is transmitted to and reproduced by the other.

On sending a message through the telephone, the instrument is placed before the mouth and the words spoken into it. The receiving diaphragm gives its vibrations to the air confined within the open end of the instrument and the listener's ear, and he hears the words spoken before the transmitter at the distant end of the line, as a soft but perfectly distinct whisper. The vibrations given to the air are exceedingly delicate, and cannot be heard much beyond the instrument, but this is not an inconvenience, as the instrument is easily held to the ear. For way stations, a loop is made in the line, and by passing the loop through one of these instruments, every word passing on the line may be heard. For calling attention, a bell signal is used that may be operated at either end of the line. For branches and central offices, switch-boards, etc., are provided as in ordinary telegraphing. This style of telephone works well in sending messages from the lower depths of coal-mines to the surface. Hitherto, telegraphs have not been successful in mines, and a new field is thus opened for telephony.

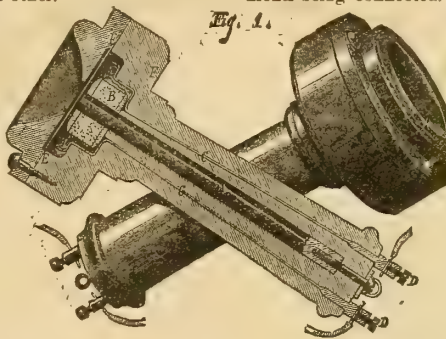
The large engraving affords an excellent idea of how the instrument is used, and also of about the extent of circuit over which it is known to be capable of successful operation. We suppose the closed

wire circuit to extend from New York to Newark thence to Paterson and Yonkers, and back to New York, a distance of about 50 miles air line, or some 70 miles by railway. The figure marked New York may be considered as a public speaker delivering a lecture to be heard in the towns mentioned. He talks into one telephone while he holds another to his ear, in order, for example, to hear the applause, etc., of his auditory; or he may be maintaining a discussion or debate, and he then hears his adversary's replies or interruptions. Now, at Newark there is simply a reporter, who takes down the speech phonographically, the words pass on through the telephone and reach Paterson. Here we show two persons, each with a telephone, the two instruments being connected. Each hears from his own

instrument. Perhaps, in future, operatic or concert companies and lecturers, instead of traveling over the country, will simply send but telephones enough to present each person of their audience in a distant city with an instrument apiece, and do their talking and singing once for all in the metropolis. In Yonkers we show three persons listening to a single instrument, which may be done in a very quiet room. Finally, in a side sketch we show how the telephone is arranged to serve as a

speaking trumpet between office and shop in a factory. Of course for a long circuit there would be earth connections instead of the wire loop.

Professor Thomson, of England, in the course of a recent experiment with the telephone in a colliery near Liverpool, accomplished the novel feat of giving a short lecture on the telephone, at one and the same time, to Mr. Hall, who was in the mine, and the company who were in the office. The professor stated how delighted he was with the great improvement which had been made in the instrument since it was tested in a crude state by the inventor and himself at the Philadelphia Exhibition before the Emperor of Brazil. Bell's telephone he considered as great an advance beyond Reiss' and the others, as the syphon recorder was an improvement upon the preceding electric instruments.



Life.

The following literary curiosity is from the pen of Mrs. N. A. Deming, and is the result of a year's laborious search among the voluminous writings of thirty-eight leading poets of the past and present. Each line is a quotation from some one of the standard authors of England and America. The numbers refer to the authors below.

1. Why all this toil for triumphs of an hour?
2. Life's a short summer, man a flower;
3. By turns we catch the vital breath and die—
4. The cradle and the tomb, alas! so nigh.
5. To be is better far than not to be,
6. Though all man's life may seem a tragedy;
7. But light cares speak when mighty griefs are dumb.
8. The bottom is but shallow whence they come.
9. Your fate is but the common fate of all;
10. Unmingled joys, here, to no man befall.
11. Nature to each allots his proper sphere,
12. Fortune makes folly her peculiar care.
13. Custom does not often reason overrule,
14. And throw a cruel sunshine on a fool.
15. Live will, how long or short, permit to heaven,
16. They who forgive most, shall be most forgiven.
17. Sin may be clasped so close we cannot see its face—
18. Vile intercourse where virtue has no place.
19. Then keep each passion down, however dear,
20. Thou pendulum, betwixt a smile and tear.
21. Her sensual snare let faithless pleasures lay,
22. With craft and skill, to ruin and betray.
23. Soar not too high to fall, but stoop to rise,
24. We masters grow of all that we despise.
25. O, then renounce that impious self-esteem—
26. Riches have wings and grandeur is a dream.
27. Think not ambition wise because 'tis brave,
28. The paths of glory lead but to the grave.
29. What is ambition? 'Tis a glorious cheat,
30. Only destructive to the brave and great.
31. What's all the gaudy glitter of a crown?
32. The way to bliss lies not on beds of down.
33. How long we live, not years, but actions tell;
34. That man lives twice who lives the first life well,
35. Make, then, while yet we may, your God your friend,
36. Whom Christians worship, yet not comprehend.
37. The trust that's given guard; and to yourself be just,
38. For live we how we can, yet die we must.

No. 1. Young; 2. Dr. Johnson; 3. Pope; 4. Prior; 5. Sewel; 6. Spenser; 7. Daniel; 8. Sir Walter Raleigh; 9. Longfellow; 10. Southwell; 11. Congreve; 12. Churchill; 13. Rochester; 14. Armstrong; 15. Milton; 16. Bailey; 17. Trench; 18. Somerville; 19. Thompson; 20. Byron; 21. Smollet; 22. Crabbe; 23. Massinger; 24. Cowley; 25. Beattie; 26. Cownes; 27. Sir Walter Davenant; 28. Grey; 29. Willis; 30. Addison; 31. Dryden; 32. Francis Quarles; 33. Hall; 34. Herriek; 35. William Mason; 36. Hill; 37. Dana; 38. Shakespeare.

Making A Heroine.

BY MISS L. A. CHURCHILL.

CHAPTER I.

"Better to walk the real unseen, than watch the hour's event;
Better the "well done!" at the last, than the air with shouting rent."

GEORGE MACDONALD

Their names were Lena Chester and Berty Pearson. They made an interesting picture as they sat together in the fading light, these two young lady operators, employees on a certain New England railroad line.

Would you know how they looked? I am no adept at pen pictures, but will briefly sketch them for you, leaving much for your imagination to do when I have finished.

A tall, well formed figure was Lena Chester's. A finely shaped head, a rather full face, colorless but for the pink in the lips, which closed over white, even, handsome teeth, or parted in a smile which wonderfully lit up features whose habitual expression was grave, almost sad. Her hair was brown, her eyes blue.

In speaking of her, people invariably said, "she is fine looking." No person ever disputed that.

Berty Pearson was pretty. Her short figure was splendidly proportioned. If you fancy a low forehead for a lady, hers would not have suited you, for it was high and broad. Her hair was neither brown nor golden, but something between the two. Her skin was white, her cheeks rosy, and her eyes a deep, dark, handsome violet color. Every emotion showed itself plainly on her bright, expressive

countenance. Lena Chester's manner was earnest, quiet, engaging. Berty Pearson's sprightly, impulsive, and when she chose to have it so, very winning.

Lena was an orphan, both her parents having died when she was a mere child. No honest work had ever seemed degrading to her, and she had performed many kinds before she became an operator, although when my story opens she was but eighteen, and had been mistress of the office over which she presided somewhat over a year. Although self educated, her knowledge of books, as well as of people and things, was more extensive and valuable than that of many a girl who has spent years and hundreds of dollars in getting what is termed "a finished education."

Berty Pearson was one of a large family, and before she studied telegraphy had always found plenty of employment in helping to lessen her mother's household cares. She was a few months older than Lena, and her advantages had been somewhat better. She was well read, intelligent, and witty in conversation. As the trains ran in such a manner as to render it possible, she often spent an hour with her friend after business hours were over, before returning to her home, where she boarded.

On the evening when I introduce my girls to you, Berty was seated on a hassock at Lena's feet. Looking up into her face, she said:

"I heard something to-day, Lena, which very much surprised me. Sadie Dudley called to see me, and said that her father had enlarged his paper, and had offered you a salary to become a regular contributor to it, and that you refused to accept his offer."

"And why did my refusal surprise you?" asked Lena. "Or were you surprised to think he made such an offer?"

"Why," said Berty, entirely ignoring the latter question. "Because, it seems to me that any girl in your position, and in possession of her senses, would have been delighted with such an offer, and would have at once accepted it. You have plenty of time, and your letters show plainly enough that you are not wanting in talent. It surely cannot be that you did not care for the money, unless you have a way of expanding your salary which is quite unknown to me."

"Yes, Berty, I have time to write, and I assure you the offered salary would not come amiss, but I know that I cannot honestly earn it. I shall never write a word for money, never a line for fame. When I have learned to subdue my faults, to say at all times, "Not my will, but Thine," to shape my own course nobly and well, I may be worthy to help shape the course of others. There is enough poor authorship now. If ever I write at all, my thoughts shall be worth the paper on which they are written." When I have learned life's useful lessons myself, perhaps I can help teach them to my fellows. Until then, instead of making paper heroines, I will strive to make one of myself, by becoming a good, true, glorious woman. Such are my ideal heroines, though no romancer's pen writes their names, and no poet tells of their charms. Mr. Dudley was kind, and I appreciate his goodness, but I am sure it was through Sadie's instrumentality that the offer was made. She, like you, imagines that I have literary talent because she fancies I write fine letters."

There was silence for a moment after Lena finished speaking, but it was presently broken by Berty.

"Lena Chester, you are a splendid old darling, but I must say that you are the greatest baby I ever saw. I'm quite sure if I had been in your place, no conscientious scruples would have kept me from accepting the offer. I should have secured that salary if I had been obliged to write parodies on the Mother Goose Melodies to fill his columns. Here comes my train, as usual, before I'm half ready to go. What did I do with that other glove? Oh, here it is, on the floor. Now, kiss me quick, or I shall be left on your hands for the night."

Lena gave the required caress, wrapped her shawl around her, and said good night.

Do not think, dear reader, that I am writing of imaginary girls. I acknowledge that Lena Chester, like the "Margaret" of whom Mrs. Whitney tells us in "Sights and Insights," was "different from most girls." Not perfect. Oh, no! But those who knew her best loved her. Yet there were not few who misunderstood and disliked her. She was not an ordinary girl, but she was, and is, a real person. I doubt not we have many like her in our broad world. And we see many Berties, too. So you see I am not introducing strange or impossible people to you.

CHAPTER II.

"And there was one a dreamer born,"

WHITTIER.

A slight figure; a thin, white face; a high, broad forehead, over which lay half concealing it, a mass of light, wavy hair, a sweet, effeminate looking mouth, and a pair of large eyes, with a misty, dreamy look in their brown depths. Such was Lena Chester's pupil, Arthur Ainslie. One would never have imagined that twenty-one years had passed over his boyish, or rather girlish looking head. To Lena he seemed like a mere child, and she petted him as she would have petted a young brother had one been given her.

His had been a lonely life. His mother had died in giving him birth, and so he had been brought up alone with his father, whose duties as a successful physician kept him away from his home and child the greater part of the time. His only other companion was in his babyhood his nurse, and in his maturer years his tutor, the latter a grave, quiet, young man, who did his work conscientiously, but talked only when it was necessary. The two old servants whom his father employed loved and petted him, but his books were his chief delight and comfort. He was especially fond of poetry, and his young mind early drank in the glorious thoughts of the most gifted poets, both of his own country, and the countries of the Old World. I think life must have seemed much to him as it did to Tennyson's lotus eaters, one long, dreamy, summer afternoon.

But Lena Chester, with her practical common sense, her many original ideas of people and things, her knowledge of real life, and her always ready, and ever fresh conversation, was like a new and strange poem to him, which he went on reading day after day with ever increasing interest.

Berty Pearson became his friend, and many conversations took place on the fire between them. Her visits to Lena were as frequent as ever, and became all the more delightful because he was nearly always present when she came.

When he had been her pupil about three months, Lena entered her office one bright May morning to find him there before her, and practicing. She paused on the threshold, and listened, while the words:

"These are Clan Alpin's warriors true,
And Saxon I am Roderick Dhu."

scudded through the room before she bade him good morning.

"Good morning, Miss Lena," he said, turning with a smile to greet his young teacher. "Before you came, I was up in that Scottish mountain pass with James Fitz James and Roderick Dhu. I wish I could have thanked Walter Scott for writing that poem, for it has given me many days of enjoyment, and when I read it I long to be like the heroes he tells about, so that I, too, might do something grand and splendid."

"And do you think, Arty," remarked Lena, as she hung up her hat, and drew off her gloves, "that one must be a James Fitz James, or a Roderick Dhu, to do something grand and splendid? With your talents and education, you should be able to do something far more noble than either of those men did. But I want you to put poetry out of your head for a few minutes. I have a very prosy subject to speak about. Do you know anything of a young man named Percival, who is stopping with his father at the St. Charles Hotel in the village?"

"I am not personally acquainted with him, but he has the reputation of being a rather dissipated fellow," Arthur replied. "Are you interested in him?"

"Yes, just now. His father called on me, at my boarding place last evening, and what think you his errand was, my Arthur?"

"I'm afraid I never could guess, Miss Lena," replied Arthur, becoming interested.

"I know you never could. Well, he wishes me to teach his son to telegraph."

"To teach his son to telegraph!" repeated Arthur, in a surprised tone. "What possible object can he have in wishing his son to learn telegraphy?"

"He says that Ralph has been very intemperate for the past three years, and he feels that nothing will cure him of his evil habit but hard work, if even that will do. A merchant in New York, who has long been a friend of the family, has offered to take him into his counting house, if he will learn telegraphy. He has a wire running between his two large stores, and often wishes to send messages from one to the other. Ralph has consented to accept the position, and wishes to commence his

telegraphic study at once. His father wishes to keep him near himself, and so desires me to become his teacher, in order that he may board with him at the St. Charles."

Lena paused, and Arthur asked: "What answer did you give him, Miss Lena?"

"I have not answered him yet, Arty. The fact is, we have been so happy here, just you and I, that I should hate to have a stranger come in and spoil all our nice quiet times."

Arthur did not instantly reply to this, but after a moment, said: "Yes, they been very pleasant, and I, too, dislike to think of there being a third person constantly here; but Mr. Percival may be one of your chances to do something grand and splendid. If you could be instrumental in saving that young man from a life of drunkenness, and his father's declining years from sorrow, you could but feel that yours had been no ignoble work."

"You are right, my dear child, the experiment is at least worth trying. But will you help me in this work?"

"All that I can do will be done cheerfully, but I am only a poor, weak boy, at best, so don't look for much assistance from me."

"Thank you, my Arthur, I am sure you can and will help me a great deal."

She reached him her hand as she spoke. He took it, held it a moment, raised it to his lips, and then released it.

Thus was the compact sealed. It was decided that Ralph Percival should come the next Monday. It was then Saturday.

The day passed quietly and happily away.

In the early evening Berty Pearson came, and spent a pleasant hour with her friends, and then returned to her home, to dream, when sleep visited her, of the fair, pure face, and brown honest eyes of Lena's pupil. And that pupil in his dreams, held again the hand of his young teacher, Lena Chester, and kissed it not once, but many times.

[TO BE CONTINUED.]

The Tramp Operator.

Perhaps no place presents better opportunities for the study of human nature in its good as well as its bad phases than a city lock-up. That vast army of highroad gentry, in other lands dubbed the Moor, in our own the tramp, furnishes to these city hostleries numerous and varied subjects for philosophical dissection. From that class of burly, red-nosed haggard faced fellows, who, despite their being behind the bars, still keep up the endless clamor for a few cents, to the pale-faced repentant youth, whose only appeal is that you will use your influence to effect his release—each has there its daily representative.

Accustomed as I have been to visit these places to scrutinize and question the interesting cases within the cells, I have never yet met one who so readily and thoroughly aroused my curiosity, and, for a while, enlisted my sympathy, as the occupant of cell No. 10, in the lock-up of this city a few mornings ago.

Ascertaining by chance from the communicative warden that prisoner, who had been incarcerated for drunkenness the night before, had given his name and occupation as Tony Miller, telegraph operator, I at once felt a peculiar interest in him, and immediately repaired to his cell. I was a little surprised to see that fully fifty years had passed over the man's head, and greatly disappointed and grieved to notice from his nose that probably a dozen glasses per day had passed his lips. At all events the natural supposition was, that he was an "old timer," and that he would prove a prolific source of much valuable information touching the early days of our profession.

Perhaps he had been at one time a chief operator who had rendered himself so obnoxious by petty acts of tyranny toward those beneath him, that they, wrought to exasperation, had conspired to dethrone him, and had effectually accomplished his downfall. This is frequently done. So frequently that it is a difficult matter to find a chief-to-day whose heart is not as susceptible to brotherly sympathy as a young maiden's cheek to the rosy blush.

Perhaps he had been higher still, and could at one time write his name Antonius Miller, Division Superintendent, but, through a combination of circumstances, notably hard drinking, had "fallen from his high estate," and was now a conspicuous proof that in spite of a contrary belief division superintendents really experience some of the misfortunes of this life.

Perhaps, however, on the other hand, he was at

one time merely a battery man, who, performing his work in a damp, mouldy cellar, had acquired a habit of taking a drink or two before entering his gloomy cavern, and the custom growing upon him, at length imagined that he was always going into a cellar, thus becoming so irreclaimable a victim of dissipation and neglect, that at length he was no longer able to fill a cup, either for himself or the battery.

Perhaps—but let us cease to conjecture, and by conversing with the man himself, dispel the uncertainty.

"I understand, my friend, from the records outside, that you are a telegrapher. I belong to that unfortunate class myself, and—"

Placing his index finger on the side of his nose, and winking significantly, he replied, "Yes, Jim, I am one of you." Then, after a pause, during which he stood before me with head bent in thought, he continued, "And I have done some pretty tall work in my day too, battered and wrecked as I now look."

"Where have you worked? What did you sign?" I asked, my interest increasing.

"Oh! everywhere," he replied. "New York, Chicago, Boston, Baltimore, and a hundred other smaller places. I've been the rounds, young man, as the current said to the relay."

"Where did you last get dischar—I mean where did you work last?" I inquired, blushing deeply at my mistake.

"Oh, it's ten years since I've touched a key. I worked then in a little town out west, but I've done some tall work, chum. Got any tobacco?"

"Which will you have, 'Solace' or 'Century'?" I quietly demanded.

"Which ever you chews."

Rather than to give him his own way, I handed him a plug, from which, after much dental tugging and tearing, he took a chew, placing the rest in his pocket.

"Yes," he went on, rolling the quid so as to get into a position to avoid interference with clear articulation, "it was in '45, 32 years ago, before you were born, I reckon."

"Yes," I assented, "that's eight years before I saw the light."

"Well, I was then—let me see—32 from 51 leaves 19. Yes, I was 19 years old. I worked in Kansas City, regular day man; used to take press mornings, and work Chicago duplex afternoons."

"But," I broke in, "at that time the duplex was not invent—"

"Don't interrupt me," he retorted, fiercely.

"It was not invented till a few years ago," I maintained, determined not to give him a point.

"You are right," he said, suddenly recollecting himself; "I meant regular wire, not duplex. Well, one day I had a big batch of business, about three hundred paid messages."

"Isn't that a big pile for an office that was not in existence at the time?" I quietly remarked.

"Do you doubt it?" he asked savagely.

"It's a pretty big pile."

"Can't help it. I had about three hundred. Big railroad accident, and the superintendent and other officials of the road had done nothing but call for blanks."

"But you said paid business."

"Who's tellin' this story—you or me?" he asked, with a face bristling of deadly hate.

I said nothing, and he went on.

"I had about three hundred messages, and I sez to Billy West, the Chicago man: 'Billy,' sez I, 'I've got a 300 page book of the little beauties here and not an office message among 'em'. 'Short or long?' said Billy; 'long,' said I; 'thro' or city?' said Billy; 'city,' said I; 'red or black,' said Billy; 'black,' said I; 'paid or collect?' said Billy; 'collect,' said I—"

"But," I interferred, "you said they were all paid."

"Oh, don't be so particular; paid at the other end of the route."

"I understand," I replied, greatly relieved by the explanation, "in the words of our great general 'be sure you're right, then go ahead' period."

"There may be a joke intended there, but I don't quite see it. I am rather obtuse to-day," he replied.

"Obtuse is a good word," I remarked, by way of conciliating him.

"Only a two syllabler, I've got two or three solidier ones in my cranium, which—"

"Please don't," I entreated; "go on with your narrative."

"Tale, you mean."

"Yes, call it anything you please, so long as you give us the tail or end," I replied.

"Are you well?" he asked, with startling suddenness.

"Never better," I nervously responded.

"Then don't attempt any more such weak ones. But where did I stop, as the lightning said to the arrester?"

"You were just about to send that batch of 300 to Chicago."

"Oh, yes! Well, Billy being all ready, told me to sling 'em; and I did. The speed was terrific. I grasped my key firmly, braced my feet against the gas-pipe, compressed my teeth, and 'began. For two hours that business sped over the wire like a ball from a rifle. With unwearied hand I rattled the brazen key, and Billy at the other end copied; copied, never breaking, but getting every word down in a clear, legible hand, with every t crossed, and every i dotted. At the expiration of the two hours, just as a distant bell was pealing four distinct chimes, I rose from the desk."

His eyes sparkled vivaciously as he finished the recital, and I eyed him askance.

"Had you sent them all?" I asked, breathing hard, pained to think that this superannuated fossil had surpassed the magnificent efforts of Moreland, Baldwin, Catlin, Wood, and Bennett, at New York a few weeks ago.

"Yes, every one of them," he replied, coolly, changing his quid to the other cheek. "And now, young man, what do you think of that?"

"What do you sign?" I asked, searchingly.

"M. R.," he replied.

"Well, M. R., now that I am on familiar terms with you," I remarked, slowly measuring my words, and giving him a terrible scowl, "it is the worst lie you were ever guilty of telling."

What cared I when he started up with knife in hand, and menacingly said he would make me welter in my gore? What cared I when he plunged his empty hand into his pocket, and drawing forth my plug of tobacco, levelled it at my head? What, indeed! I was strong in the happy consciousness of being right. I knew that my words had not belied my belief. And one more reason, I was on the outside, and he was on the inside of the cell, and for the life of him he could not get at me, the big liar that he was. I started away, and as I thought of the total depravity of this poor creature, I could not forgive him, for had he not sported with my credulity, with the credulity of one who had never been either a president of a life insurance company or of a savings bank, and who had not in any way influenced the consolidation of the two telegraph companies? to all of which he doth herewith append his sign and seal.

RUDDY.

Only a Small One.

One afternoon last week a middle-aged German lady appeared at the telegraph office in a neighboring city, and desired to send a dispatch to her sister in New York. It was about a trunk which had been sent there but had miscarried. The lady was somewhat obscure in her English, but she dictated a dispatch, and Mr. Case, the manager, wrote it out in the most beautiful manner, with a flourish at the end of every word, and a large one at the end of a sentence, and every i dotted and every t crossed.

"Sthop a leedle," she said, "I hof der key of das troonk in mein bocket. I sends him mit der dellygraph."

"But," said Mr. Case, "we do not send material objects by the telegraph. The telegraph is the great modern Briareus—a metallic nerve system, as it were, radiating from common centres and stretching over all parts of the known world, except Preston and some sections of New Jersey. But it is for the transmission of non-material matters—the intellectual essences, as it were."

"Yaw, dat ish so," said the woman; "Vell, I sends him den."

"You misunderstand me," said Mr. Case. "A key is material. Probably you have never been out late enough at night to fully realize how extensively material a key may become; but even you will not claim that a key is spirit."

"I vas not speak of somedings to trink," said the woman with some surprise, "I vas speak of dot leedle key."

"We cannot send the key," returned Mr. Case, "you must have that done by express."

"Vell, I bays mine taxes here, und I have no troubles mit somebodys," began the woman doubtfully, as she moved away. In a moment she re-opened the door; "He vas a small leedle key," she said, coaxingly.

Later in the day she was observed bargaining with a baggage expressman to have the key carried to New York.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

December 1st, 1877.

NON-SUBSCRIBERS receiving copies of this issue of *THE OPERATOR* will please remember that it is sent to let them see what the paper is like, and that we desire, if possible, to secure their subscriptions. Instructions how to subscribe will be found on page 15. After reading, please show the copy to any other operators that may be in your town or city, and try and send their subscription along with your own.

We intended to have given the portrait of Mr. F. W. Jones, of Chicago, in this issue. It will appear in a future number.

There has been a slight decline in the prices of both Western Union and A. and P. stock since last issue. Western Union is now quoted at 78½ asked, and A. and P. at 23¼ asked.

We wish it particularly understood that we will change addresses as often as desired. When requesting a change, always give the former as well as the present address.

A CORRESPONDENT in Galveston thinks the majority of the readers of *THE OPERATOR* would prefer "Themes for the Thoughtful" to "Sparks." Let's take a vote on the question.

THE OPERATOR is always stopped at the expiration of the year, or of the time for which it is paid; so that if you wish to continue it, it would be well to renew your subscription at least one week before the time expires.

Oh, of course! The A. and P. having been gobbled up, and the field once more clear, the Western Union immediately increased the rates. No word of reinstating the salaries of the underpaid operators, however, oh, no!

Regular readers who receive more than one copy of this issue of *THE OPERATOR* will please use the extra ones in getting up clubs. Every one can do something in that direction this issue, as a specimen copy is sent free to every Western Union and connecting-line office in the country.

Good news for those about to renew their subscriptions. We have decided to send *THE OPERATOR* one year—or from November 1st, 1877 to January 1st, 1879—and a copy of "Lightning Flashes," to the same or separate addresses, on receipt of only \$2.50. *THE OPERATOR* one year and "Oakum Pickings," paper, \$1.75. "Lightning Flashes" and "Oakum Pickings," \$2.00. Paper, as above, and both books, only \$3.00.

Annual Meeting of the Telegrapher's Mutual Benefit Association.

The eleventh annual meeting of the above association was called to order by the Treasurer, Mr. J. D. Reid, last Wednesday evening, in room 50, Western Union building, this city. Dr. Norvin Green was elected chairman. The reports of the Secretary and Treasurer having been read and ordered on file, an appeal from Mr. M. C. Bagley, against the decision of the Executive Committee, was considered. It appears that Mr. Bagley was one of the original members of the Association, but had allowed his policy to lapse. He now desired to be reinstated, but the Executive Committee denied his application, on the ground that he was consumptive. After considerable discussion, the action of the Executive Committee was approved. The constitution and by-laws, as printed in the last number of *The Journal of the Telegraph*, were then taken up and discussed in detail. The principle changes and amendments agreed upon were as follows: Constitution, Article II.—The minimum age at which persons are to be eligible for membership was changed from eighteen to fourteen. Article III.: The offices of Secretary and Treasurer are to continue as heretofore, and not filled by one person, as proposed. By-laws: Section V.—The initiation fee is to be two dollars, instead of three. Section VI.: The dues to be one dollar on the death of each member, as heretofore, and not one dollar per month as proposed. Section IX. was stricken out and one substituted authorizing the increasing of the reserve fund to \$20,000. Section XIII. was amended, so that New York members can be represented at the meetings by proxy, in the same manner as outside members. J. D. Reid was elected President; F. A. Armstrong, Cincinnati, Vice-President; A. H. Watson, Secretary; R. H. Rochester, Treasurer; and Messrs. A. S. Brown and Wm. Holmes, New York; James Merrihew, Philadelphia; C. H. Summers, Chicago; and J. T. Alleyn, New Orleans, members of the Executive Committee. It was resolved that all dues for assessments are to be remitted or paid to the secretary as heretofore. The meeting then adjourned *sine die*.

From the treasurer's report we learn that the association was formed ten years ago, with 125 members, while at present the membership is 1,822. The receipts for the year, including a balance on hand of \$5,345.33, were - - \$22,800 85
Amount paid to heirs of deceased members - - \$13,200 00
Expenses, Clerk-hire, Printing, Postage, etc. - - - 961 05
Paid for \$3,000 Bonds and Premiums - - - - 8,048 00
17,209 70

Balance on hand - - - \$5,591 15

From the secretary we learn that 378 new members have been added during the year; 87 former members restored; 16 deaths taken place, 14 of them being from consumption, and 70 members been lost through delinquency in payment of dues.

Fifteen new agencies have been established during the year. There have been 105 deaths since the association was organized, and \$93,217.44 paid heirs of deceased members. The average ratio of deaths has been one to every 110 members.

This is a very excellent association, and deserves every success. The initiation fee is

two dollars. On the death of each member the heirs of the latter are paid \$1,000. Application blanks and all necessary information in regard to the association will be furnished by Mr. A. H. Watson, Secretary, P. O. Box, 3,175, or by any of the agents.

To Non-Subscribers.

We send a specimen copy of this issue of *THE OPERATOR* to a very large number of offices where we have not now any subscribers. The object is to give non-subscribers an opportunity of seeing just what the paper is like, and if they feel disposed, to have them send us their subscription.

Although *THE OPERATOR* was first started as a little four page sheet, and has since grown to its present size, with all the finest telegraphic writers in the country as contributors, the subscription price has not only never been increased, but we to-day make a special offer to send the paper for the months of November and December free to new yearly subscribers. The supply of these back numbers is limited. Persons desiring them would, therefore, do well to order early.

We have no hesitation in saying that *THE OPERATOR* is now one of the cheapest papers in the country, especially when the quality of its contents is taken into consideration. It costs less than nine cents a month, postage prepaid and address changed as often as desired without extra charge. It aims to carry sunshine and cheer to the offices it visits, and to provide its readers with wholesome, instructive, spicy, entertaining, and amusing reading. It at the same time labors faithfully for the best interests of the telegraphic fraternity, to elevate the profession morally and socially, and to band its members together as one great family.

To show the popularity of the paper among telegraphers all over the country, we have only to quote the following extracts from a few private letters recently received:

"The best paper of its kind in the Union."
"Decidedly the favorite operator with us all."
"I am delighted with the paper, and could not do without it."
"Wouldn't be without *THE OPERATOR* under any circumstance."
"*THE OPERATOR* is growing more and more interesting every issue."
"Your paper is steadily gaining ground in the South. I would not miss a number for anything."
"It must be gratifying to you to know that you are making the paper so much of a necessity that we cannot help subscribing for it."

Non-subscribers will find instructions how to subscribe on page 15. After attending to that, duty, and reading the paper through, please show it to the other telegraphers in your town or city, and try and get them to send in their subscriptions also.

THERE is another telephone in the field. A Mr. Richmond, of Lansing, Mich., has invented an instrument which was tested November 18th, over a wire of the Western Union Company, between Lansing and Detroit, a distance of 230 miles, and worked like the proverbial charm. The electricians present at the exhibition freely assert that it is ahead of the Bell telephone.

"HAPPY is the man who ne'er consents, by ill advice to walk," but sticks to wisdom's ways, and reads "Lightning Flashes" and *THE OPERATOR*.

The Telegraph Consolidation.

Attorney General Lear, of Harrisburg, Pa., notified President Orton, of the Western Union, Nov. 15th, that a day had been appointed in November to hear argument why the Western Union and Atlantic and Pacific companies are consolidated, contrary to the provisions of the constitution of Pennsylvania.

Accordingly on Saturday, November 24th, before Attorney General Lear, of Pennsylvania, General Charles T. Colliss, Solicitor for the city of Philadelphia, delivered an argument in favor of the issuance of a writ of *quo warranto* against the Western Union Telegraph Company. The Hon. Benjamin Harris Brewster delivered an argument on Friday 30th, he having been too ill to attend the former hearing. This is the first case under the new State constitution, which declares "that no telegraph company shall consolidate with, or hold a controlling interest in, the stock or bonds of any other telegraph company, owning a competing line; or acquire by purchase, or otherwise, a competing line of telegraph."

The defense of the Western Union will be that both companies are chartered and domiciled in this State; and the stronger plea, made under the act of Congress passed June 24, 1866, which permits the establishment and operation of telegraph lines by any company then in existence, or that may be organized upon any of the military or post roads of the United States. Railroads carrying mails are considered post roads. The Western Union agreed to the conditions of Government service also contained in this act, and hence looks for protection under it. A case was decided in its favor under this act in Florida a few years ago. It is said by the friends of the consolidated companies that a complainant having the requisite residence in Pennsylvania—the only State having such a clause in its constitution—has been in active demand for some time.

Death of Superintendent Calvin T. Sellers.

Calvin T. Sellers, Superintendent of the Philadelphia, Reading and Pottsville Telegraph Company, died at Reading, Pa., November 24th, in the 35th year of his age. The deceased was unmarried and resided with his mother. Mr. Sellers learned telegraphy at an early age in the employ of the Pennsylvania Railroad at Altoona, Pa. During the war he was attached to the United States Secret Telegraph Service and operated in Washington, thence down the Potomac, across to Martinsburg, and many important military points in Virginia. At the close of the war deceased returned to Philadelphia, and was employed by the Atlantic and Ohio Telegraph Company until 1865, when President Smith, then of the Philadelphia and Reading Railroad Company, appointed him Superintendent of the P. R. & P. lines, which position he occupied with ability, honor, and integrity, up to the time of his death.

WE beg to remind readers that no matter what telegraphic instrument they want, or by whom manufactured, it can be had through THE OPERATOR Purchasing Agency as cheap, and in many cases cheaper, than if ordered direct. We will thank them very much if in future they will send all their orders to us

Premiums for Clubs.

As a specimen copy of this issue of THE OPERATOR goes to every Western Union and connecting line office in the country, we hope all our present readers will embrace the opportunity of doing what they can toward increasing our subscription list. To encourage them in the good work we offer the following liberal premiums for clubs. Names can be sent as fast as received, which will be placed to your credit, and can be added to at any time.

For 2 Yearly Subscriptions, One Pack of Visiting Cards and Engraving of Prof. Morse.

" 3 "	"	Copy of "Oakum Pickings."
" 5 "	"	Copy of THE OPERATOR, 1 year.
" 6 "	"	One No. 6 Exercising Tube.
" 7 "	"	Copy of "Lightning Flashes."
" 9 "	"	"Lightning Flashes" & "Pickings."
" 12 "	"	OPERATOR, "Flashes" & "Pickings."
" 15 "	"	An A Sounder or Learner's Outfit.
" 18 "	"	Goodyear Health Lift Complete.
" 24 "	"	Health Lift and copy of "Flashes."
" 30 "	"	A Splendid Nickel-Plated Relay.

OUR SERIAL STORY.—We would draw attention to the opening chapters of the serial telegraphic story by one of our contributors, Miss L. A. Churchill, which is commenced in this issue. Miss Churchill, author of "Playing with Fire," in "Lightning Flashes," "Waiting," "Eyes of Blue and Eyes of Gray" etc., in THE OPERATOR, is a very graceful writer, and the present story will be found a very interesting one. "Making a Heroine" was written for THE OPERATOR, and will probably run for about three months. We have on hand another serial telegraphic story from the pen of the famous novelist Anthony Trollope, which will be begun as soon as we can find room for it. New subscribers will not only secure these stories, but also, if their subscriptions reach us before the supply of back numbers is exhausted, the pretty little love story complete, "Wooing by Wire," by the late Miss J. J. Schofield.

THE NEWSPAPER.—An exchange says: The value of a reliable and ably-conducted newspaper to any community or profession can hardly be estimated, and yet it is perhaps never thoroughly appreciated. We become so familiar with it that we look upon it as something to be expected as a matter of course, but it is only when we find ourselves deprived of its medium of communication that we realize its value. It is not only the information contained in a paper that constitutes its value. It discusses faithfully and fearlessly the live issues of the day, and is a powerful means of education. For this reason it demands a higher degree of talent and requires a vast amount of labor and research. It goes abroad, is read and copied to an extent realized by few, and the community or profession is judged by this standard.

AN EXTRAORDINARY OFFER.—We will send THE OPERATOR from November 1, 1877, until January 1, 1879, free by mail, to any address, on receipt of \$1.25, changing addresses as often as desired without extra charge. This will give the two stories, "Wooing by Wire," by Miss J. J. Schofield, and "Making a Heroine," by Miss L. A. Churchill, complete. The paper as above, and a copy of "Oakum Pickings," will be sent prepaid on receipt of \$1.75, the paper and "Lightning Flashes," \$2.50, or the paper as above, and a copy each of "Lightning Flashes" and "Oakum Pickings" for \$3.00.

Sparks.

When a man starts for the dentist's, he generally takes a tooth-hurty gait.

Never plead guilty to poverty. So far as the world is concerned, you might better admit that you are a villain.

English is the court language of Germany. It is a proud moment when a Briton or American, visiting the Palace, is saluted with "Dot vas a pooty schplentit morning, ain't it!"

The young woman who, being engaged, sighed in sentimental rhythm, "Oh, for some new found name by which to call him!" married her lover about six months ago, and has now decided to call him Old Beeswax.

A French wit says that it is the duty of a gallant man always to pretend to believe everything a woman says, out of respect to her; and never to believe anything she says, out of respect to himself.

A poor young man once fell in love with an heiress, and the passion being returned, it only wanted the parents' consent to make them happy. At length, meeting the father, he asked for the daughter's hand. "How much money can you command?" "I cannot command much," was the reply. "What are your expectations?" "Well, to tell the truth, I expect to run away with your daughter and marry her, if you don't give your consent."

A young lady was at a party during which quarrels between husband and wife were discussed. "I think," said an unmarried older son, "that the proper thing is for the husband to have it out at once, and thus avoid quarrels for the future. I would light a cigar in the carriage after the wedding breakfast, and settle the smoking question forever." "I would knock the cigar out of your mouth," interrupted the belle. "Do you know I don't think you would be there?" he remarked.

ALTOGETHER COMPLIMENTARY.—The ticket to an entertainment given by the Young Men's Christian Association in this city two weeks ago, read as follows:

COMPLIMENTARY.
YOUNG MEN'S CHRISTIAN ASSOCIATION.
Friday Evening, November 16, 1877.
Rev. P. S. HENSON, D. D.,
of Philadelphia
Will lecture on
FOOLS.
Admit one.

I talked with a minion from "Her Majesty's dominions. Says I, "Where are you going?" Says he, "To hide a hoe." Says I, "What are you going to hide a hoe for?" Says he, "I didn't say hide a hoe: I said hide a hoe." Says I, "Spell it." Says he, "I-da-ho." "O," says I, "Idaho." "Yes," says he, "Hide a hoe."

REGRET

I do not mourn, sweet wife of mine,
Because those ruby lips of thine—

That marble brow—
Were kissed by one who might have been,
Had I not chanced to step between,
Thy husband now.

I do not grieve because thy heart,
Ere Cupid touched it with my dart,
For him would beat:
Nor that the hand which owns my ring
Once wore his gift, a "Misphah" thing.
It was but meet.

I sigh not that his arms were placed
Some score of times around your waist,
So sweet and slim,
Ah no, my love! the woe you see
Is mine because you wedded me
Instead of him

"Are you really happy? and wouldn't you like to be a bachelor again?" asked a Newark bachelor the other day of a married friend, who had espoused a beautiful girl only a year ago. "Happy!" echoed the benedict; "happy?" "Why of course I'm happy, wouldn't change back again for all the world. But I say, Fred, let me give you a quiet word of advice: Don't be a blasted fool and get married. You hear me!"

Some Prominent Ex-Telegraphers.

There are living in New York at the present time a number of ex-telegraphers, who were formerly prominent among the more distinguished operators in this country. We will begin with Frank Cogger, who was for several years manager of the Atlantic and Pacific Company's office in Chicago, afterward night manager of the same company's office in New York, and at present representing a large Chicago grain house, of which he is a partner, and a member of the Corn Exchange. He is married, and making money rapidly, being considered one of the shrewdest buyers in the market.

"Jim" Newell, a former night manager of New Orleans office, is reporter for the Gold and Stock Telegraph Company at the Stock Exchange. His hours are from ten to three, and the position in every respect a most excellent one. He is still a bachelor.

Ira Bellows, an old Cincinnati and New York telegrapher, holds an office under the city government, at \$4,000 a year, and nothing to do. He is married, and has two children.

"Bob" Cunningham, for many years an operator at 145 Broadway, is financial editor of the *Graphic*, correspondent of the Boston *Transcript*, Hartford *Times*, Philadelphia *Ledger* and Buffalo *Courier*, and has an office in Wall street. He lives at the Fifth Avenue Hotel, and has an income of \$6,000 a year.

"Ed" Fox, who has worked in Boston, New York, Chicago, Louisville and New Orleans, is also in the newspaper business, and has charge of the *Herald* bureau at police headquarters. He has two assistants, who do all the work, though "Ed" sometimes "does" a big murder, simply to keep in practice. He is married, and receives \$50 a week.

C. A. Parsons, known throughout New York State as an unusually rapid sender, acquired a knowledge of phonography, which, in 1875, enabled him to accept a lucrative position in the General Assembly at Albany. Subsequently he became the private secretary of President Watson, of the Erie Railroad, at a salary of \$4,000 per annum, which he resigned so go into business for himself. He has now an office in the Equitable Building, employs seven clerks, and is doing a business of \$20,000 a year.

J. W. Stover, who will be remembered by many old operators as prominently connected with the National Telegraph Union, in 1865, and afterward General Agent of the District Telegraph in Boston, is now Superintendent of Gamewell's Fire Alarm Manufactory, and considered a rising man.

Walter Phillips, Wm. B. Somerville, Rufus Bullock, Ralph Pope, J. N. Ashley and W. J. Johnston are so well known that nothing of general interest regarding them need be given.

Mr. Phillips is, by common consent, recorded the highest literary honors ever attained by any member of the American Telegraph. A thoroughly self-made man, he rose from the rank of telegraph messenger to a height reached by few members of his profession. For some extraordinary fast receiving, from the late Pat Burns, in Boston, he was presented with a gold mounted stylus and a very flattering autograph letter from Professor S. F. B. Morse. Not content to plod through life in the narrow sphere of a telegraph operator—albeit a most brilliant one himself—he entered the ranks of journalism, and made his debut in his new profession on the *Providence Journal*. He afterward filled the position of night editor of the *Worcester (Mass.) Spy*. Later he established the *Attleboro' (Mass.) Gazette*, which, after running a year, he sold out at a handsome profit. Connecting himself with the New York Associated Press, in 1874, his career since is a familiar one to all telegraphers. By his ability, study, and perseverance he has been steadily promoted until to-day he holds the position of Assistant to James W. Simonton, and practically head of that powerful association of which the latter gentleman is general agent.

Wm. B. Somerville, General Agent of the National Press Association, was for many years an operator in the South Western Company's office in Louisville. He is a genial, cultured gentleman, a member of the Lotos and Union clubs, and a universal favorite with an extensive circle of acquaintances.

Rufus Bullock, one of the pioneer printing operators of the East, left the business in 1860 to accept the management of the Adams Express Company, at Atlanta, Ga. He remained South during the war, and at its conclusion entered politics and was elected Governor of Georgia on the Republican ticket by an overwhelming majority. Filling the office for two terms, he was at last defeated for the third, and came North, the possessor, it is said, of

several millions of dollars. He lives in New York, has an elegant residence on the Hudson, and enjoys life as only those who are blessed with health, wealth and contentment can.

J. N. Ashley, another New England "printer," at the breaking out of the war, resigned his position in Boston and went to the front as correspondent of some Eastern newspaper. At the close of hostilities he was appointed chief of the N. Y. *Herald* bureau at Washington, and in 1867 succeeded Frank Pope as editor and proprietor of the *Telegrapher*, which paper he continued to publish until the death of Fred Grace caused a vacancy in the editorial department of the *Journal of the Telegraph*, which Mr. Ashley accepted, and continues to hold. Perhaps no operator in the country was a more constant reader of the *Telegrapher*, during its existence, than President Orton, who, it is said, gained many of his practical and sensible ideas regarding telegraphers from a careful perusal of its columns.

W. J. Johnston, editor and proprietor of THE OPERATOR, held a position as operator in this city when the above paper was little more than a local sheet. By his energy and perseverance he has increased its circulation to 5,000 copies, transformed it into a bright, sparkling telegraphic paper, and employs all the brightest lights in the fraternity, at a fair remuneration, as contributors.

Until within the past few years no man was better known to the profession throughout the West and Southwest than E. Rosewater, chief operator of the Western Union, Omaha office. When the strike occurred "Rosey," being one of the "boys," joined his fortune with theirs and struck. A few weeks subsequently the Great Western Company extended their wires from Chicago West, and "Rosey" received the appointment of manager at Omaha. He afterwards started a daily newspaper called the *Bee*, which, under his careful management, has grown to be one of the largest and most influential papers west of the Missouri.

Another Spicy Letter from Q. Cumbers.

Owing to circumstances which I suppose it is unnecessary to state were connected with the financial depression of the country, I have not had the pleasure of seeing THE OPERATOR for some time; but, having renewed its acquaintance, I am delighted to see that in spite of the hard times, the Turkish war and the telephone, it still shows up as spicy and entertaining as ever. Thinking that some of your Canadian readers who occasionally manage to borrow THE OPERATOR would like to hear from this highly important section of the telegraphic world, I have taken upon myself to send you a few items—not, however, without lively misgivings of their safely resisting the attractions of the waste basket.

There is very little change to chronicle since you last heard from us. Our office is in the same hands, and the same place, notwithstanding numerous pathetic petitions from the staff to have it removed above the water mark of the lake, or even to have the lake itself moved to a more respectful distance. But these, our petitions, have been of no avail, the only reply we ever received being once, as the manager passed them into the stove with more than the usual promptness, he muttered something about "marble halls," and this, from his sarcastic manner, we did not judge to be favorable, so we have become reconciled to our lot, and when the lake rises and floods our office we run out a few planks and paddle round as contented as if it were furnished with Brussels carpet, nickel plated instruments, bow windows and a bath room.

Rodney is still with us, but time has wrought such a marvellous change in him that he would scarcely be recognized by those who knew him in days gone by. He has entirely discarded temperance societies and tea meetings. The Y. M. C. A. has no attraction for him now, and the smiles of school girls do not affect him a particle. He is now a shining light in ball and billiard rooms. As an authority on euclyre, pitch, and poker he rivals Hoyle himself, and for beating a board bill his superior cannot be discovered without a search warrant.

During a recent visit to Toronto he visited the opera, and there concluded that unless he became a tragedian his mission on earth would be a conspicuous failure, and he now makes life hideous to us by quoting Shakspeare every spare moment, and trying to act all sorts of impossible absurdities, much to the amusement of Patsey, however, as that erratic youth generally composes the audience, and endeavors to assure Rodney of his appreciation by "running in" groans enough to frighten a medical student. These rehearsals invariably end in the au-

dience taking a sudden excursion through the back door, closely followed by Rodney's boot, or a richly bound copy of Shakspeare's plays, while the embryo tragedian excitedly adjourns to the back yard and denounces that audience in an eloquent and vigorous speech.

I would like to be able to tell you that Patsey has blossomed into a first-class operator, but this, I regret to say, I cannot do and still retain my cherished reputation for truth. He is still a woeful and persistent plug, but his genius for defrauding other boys of their just and lawful rights, and all other description of juvenile depravity, is more fully developed.

Only the other day he procured a hollow piece of steel, and, attaching it to the battery by a long wire, gave it to another boy to hold to his ear, under the sickening delusion that it was a telephone. Telling him to listen attentively while he spoke from the office end, he went in and sent that unfortunate boy a shock that would have paralyzed a cow, and came running out with his countenance fairly beaming with innocence and eagerly inquired, "Did yer ear anything, Jim?" The engagement that followed was not decided, as Jim's father appeared on the scene with a hoe, and hostilities were; immediately suspended.

Speaking of the telephone, I see that that infamous invention is attracting considerable attention from people who could employ their time much better by going around paying their debts.

I consider the manufacture of that degrading instrument should be prohibited by law, and the inventor hustled into a sepulchre with all possible dispatch—Cos why? It takes away all that exalting mystery which surrounds the operator when manipulating his trusty key and sounder, and which causes him to be regarded by the unenlightened masses as a superior being. But, when the freshest hayseed can ascertain the price of hogs by bawling through that infernal machine, and his wife can tell her sister in Coboconk that Samantha got over the measles without professional aid, then where's the operator? Why, in Patsey's expressive phraseology, "he's left!"

It's enough to make him pack his cheese box in sheer disgust, compound with his creditors for three cents on the dollar, and emigrate to Muskoka.

Q. CUMBERS.

A Colored Opinion of the Telephone.

Old Si heard something about the telephone, and endeavored to enlighten his friends:

"Now de convenshuns ob man is wonderful!"

"What are de new improobment dat de fokes is laberin' under now?" queried Pete.

"Well, yer's heered tell ob de tellergraf whar runs on de wiah from pole ter pole, an' talks by de tip-tap moshun?"

"Ise seed dat."

"Den agin yer's heerd ob de founnogyfy dat jess ambertys what de speaker says on de spot by de congregashun ob de fust prinsipuls, which ar' de pot-books an' rafters ob de writin' book?"

"Oh, yas; dat's preckerberd my 'tention too!"

"Well, dis heah tellerfone jess lays ober dem all wuss dan totin' water ter der elmpht for fer free pass do ober crawlin' in onder de kanvass."

"An' whar kin de tellerfone do dat hit ar' so solid?"

"W'y, yer jess goes 'long an' sees er sorter young wooden dinnah bell—yer picks hit up, talks in de big end, de voice transcommits hitself 'long de wiah an' de fokes in de nex' State heahs what yer says, jess same ez ef dey wuz in de edjinin' room wid de doah open!"

"Aw' go way! You's talkin' ez ef yer thought we niggers done loss all our gumshun!"

"Hit's er bo'n fack—hope ter die ef 'tain't! Dar ain't no hoodoo 'bout dis bizniss!"

"Look heah, ole man, you wants ter go home an' hang er hoss-shoo ober yo' ears ter keep de witches from roostin' in dem!"

"Dat's allus de way wid you niggers—nuffin ain't nebbor done fer yer dat yer don't try ter go back on hit!"

"How ar' dat?"

"Kase dis heah tellerfone ar' de prime 'spensashun ob Providence fer de inclusive benefit ob de cullud race. Whar's de use ob han'-writin'? Whar's de need necessity ob skools an' univarsities? Whar's de vantiges ob high-tone eddicashun, when enny kinder nigger kin jess holler in de tellerfone, agerate de wiah, an' talk bizness wid enny ob de fokes outer town? Dat's what I wants ter kno' fum de 'sembly!"

The telephone was unanimously endorsed.

Dashes.

Current news—"This wire is open."

Rather flashy—Lightning rod agents.

Advice to amateur operators—Rather than send indifferently, wait until you can send—differently.

One of the main office men says that the wire he uses seems to be as unsteady as a temperance orator's nerves before breakfast.

Better is a red-headed, cross-eyed man, where steady sending is, than hair parted in the middle, and flighty, unreadable Morse therewith.

A woman may not be able to sharpen a pencil or adjust an instrument, but she can pack more things into a trunk than a man can in a one horse wagon.

Learned professors know about 30,000 words; children of two, from 200 to 705; ordinary people, 9,000; book agents and lightning-rod men, 9,980,998.

The telephone is being rapidly put into use at Boston. About one hundred mercantile houses are already connected with every express office in the city.

A wholesale firm in New Albany received an order by telegraph for "five thousand persecuting caps." Whether the percussion caps sent will do remains to be seen.

"Plug!" ungraciously flashed an operator to a lady with whom he had been worrying fifteen minutes over a message. "Which of us?" blandly responded the lady.

Life is but a fleeting show, existence here below is brief, but there is nothing so short in this world as the answer a man gives when you ask him for the third time what he signs.

Civilization may go on and on, but the man who opens his key to copy a message and then blandly remarks, "talking; go a. ahr," will still occasionally crop out as a relic of barbarism.

Probably there isn't half-a-dozen operators in the country who don't know just what day the pay car is due, but the man isn't born who can point to one who is able to explain at which office that wire was open.

Governor Shunk, of Pennsylvania, vetoed the first bill that came before him for the incorporation of a telegraph company, on the ground that "it would interfere with the business of the United States mails."

Said the chief sarcastically to a notorious laggard, who once, for a wonder, was promptly on time, "I have marked you as punctually this morning, Mr. Blank. What is your excuse?" "S-s-ick, sir, and couldn't sleep," was the quiet reply.

SCENE IN THE BATTERY ROOM.—TIM: "An' is it me health y'd be asking afther? Sure, an' it's half dead I am, coming down to work in all that rain this mornin'." MIKE: "Not a bit did ye, Tim. By the hokey, I come down in part of it myself!"

A correspondent, speaking of the pleasure he received from a perusal of "Lightning Flashes," says that it reminds him of a paragraph he once read to the effect that, next to a friend's discourse no morsel is more delicious than a ripe book—a book whose flavor is just as refreshing at the hundredth tasting as at the first.

ANCIENT LIGHTNING RODS.—Dr. Munke quotes a passage from the "Talmud," written in the fourth or fifth century of our era, permitting the use of iron "as a protection from lightning and thunder." Wiederman, in an editorial note, adds that the Egyptians seemed to have employed gilded masts "for warding off the bad weather coming from heaven."

There was a successful public exhibition of Edison's telephone at Washington November 16th. Professor Henry made a few introductory remarks. The vocal and instrumental music was supplied at Philadelphia. Vice President Wheeler, and several members of the Cabinet, and a number of members of Congress were present, and testified their satisfaction with the performance by repeated applause.

A PLEA.—Be kind to the poor plug. He has a father, perhaps, and a mother, who knew him in his innocent youth. Perchance even now, in some peaceful New England village, fond hearts are beating for him, and sweet lips breathe the love's dearest prayers for his welfare. Therefore lay him down tenderly, fold his hands peacefully on his breast, and close his eyes gently, as you put him to rest under the branches of the weeping willow, where the birds carol all through the summer days their softest songs. But plant him deep—plant him deep!

A correspondent says that the only way the Western Union Company economizes is by making operators' salaries low, so low that they can scarcely support themselves. Poor fellows, they can't help themselves; tariff high or low, they must tick on, and take what the big monopoly chooses to give, because till now it has driven off or bought off all opposition, so that the operator must work for Western Union or hunt other business.

THE GERMAN SUBTERRANEAN TELEGRAPH.—The *D. All. Polytech* says that the construction of the subterranean link from Potsdam to Madgeburg which is next year to be extended by way of Braunschweig, Hanover, etc., to Cologne, was commenced October 3d; also the construction of the Hamburg-Kiel line. The fine weather permitted rapid progress of the work, and made the completion of the line by the early part of November very probable. The working of the subterranean line of Berlin-Frankfort, by means of Hughes' apparatus, can be spoken of as being successful, and the probability of the interruption of the current by atmospheric influences is no longer apprehended.

THE ELECTRIC LIGHT AT THE PARIS EXHIBITION.—A special division of the Paris International Exhibition will be devoted to electricity, so that all the systems of electric lighting may be tested comparatively. The electric light continues to create the greatest interest in Paris. The experiments which we mentioned some time ago have been conducted during forty consecutive days at the Lyons railway station. A force of about forty horse power is sufficient to keep going twenty-eight electric lamps, each of which gives a light equal to eighty gas lamps, and works with regularity for ten and a half hours. The effect is splendid; the whole of the station, except the waiting room, being lighted *a giorno*. The question of economy, however, is not yet settled. It is not known whether the company will agree to pay a somewhat higher price in order to multiply the power of its illumination. The French Northern Railway has purchased a number of Gramme magneto-electric machines. They intend to use them at their terminus goods and stores.—*Nature*.

LIGHTNING FLASHES.—A volume of choice telegraphic literature, teeming with humor, fun, wit and wisdom. Its pages are filled with contributions from all the principal writers in the ranks of telegraphic literature, and several well known outsiders. The book is graphically illustrated, on tinted paper, and presents many interesting incidents of life to those unacquainted with the duties of telegraph operators. It also contains excellent cuts and sketches of Professor Morse and other prominent men who have been connected with the theory and practice of telegraphy. It is a work of valuable information, spiced with startling and humorous incidents of life, and is the second book published giving telegraphy a literature of its own. The first was very successful, and we should judge that this one will be fully appreciated by the reading public. Every person who has the fortune to see this volume, will desire to possess it. The field for this kind of literature is much larger and more productive than we realized, and we shall look forward for fresh gatherings of the rich harvest it seemingly affords for charming reading.—*N. Y. Hebrew Leader*.

Telegraphic Statistics.

If you will take the trouble to stand in the office of the Western Union Telegraph for an hour some day, you will find that out of fifty men who come in to send dispatches, forty-five will ask the day of the month of the receiving clerk.

Fifteen out of every fifty men will re-write their dispatches, while the rest will let blots and blunders go in. All of them will suddenly rush to the receiving window and call out:

"Here! get this off right away! Can I get an answer in fifteen minutes?"

The clerk invariably replies in the affirmative. He has been at this point for eleven years, and his answer has always been the same except in one case. A sender once asked if he could get a reply from Oregon in fifteen minutes, adding that the message would have to be carried seven miles on horseback. The clerk decided that it would take about sixteen minutes in that instance.

Out of fifty men forty will ask if the rates have gone up, and the other ten will ask if they have gone down. Ten will spell all their words correctly, and forty won't care a cent. Thirty will be brief, and twenty will put in the conjunctions and pay for them.—*Detroit Free Press*.

Echoes from 197.

Mrs. Fraser resigned Nov. 15.

Miss Perry is always on time.

Miss Salisbury works the Montreal wire.

Miss Alice Sellev has resumed duty at 197.

Fred Baldwin, the star operator of the day force, is rich.

Mr. Wiley's ulster is a little too full bosomed in the back.

Mr. Bradt is one of the best dressed men in the office, a nice fellow, and signs Be.

Christmas is coming, and fancy work is the order of the day in the ladies' department.

Miss Charlier has deserted the through wires, and now works "By" of the city line.

Ned Risdon the night cable operator, is a strictly first class man, and makes a superb copy.

Paul Sheehan has been enjoying a few weeks' vacation at his home in New Haven, Conn.

Joe Wood, the champion of the East, leaves the office every evening accompanied by a cane.

Miss Kennedy has been presented with a pretty white rabbit by her friend Miss Laura Moore.

Miles O'Reilly, on the State Press wire, and Miss Monaghan, on the Newburg way press, are beautiful senders.

A curious error recently occurred in a cable message: the words 7 Lpl were transposed into 7060, and so delivered.

Cable operator C. H. Robinson, is one of those quiet gentlemen who evidently believe that he who works best talks the least.

Mean speed, according to one of the ladies, is five words a minute more than the sending operator knows you are able to take.

Fred Catlin has got up a repeater adapted from a polarized relay. It works without locals, on a single circuit, and is an ingenious machine.

Charlie Howlett, who was detailed as the reserve of the American team of telegraphers, is very high toned. He boards at the Fifth Avenue Hotel.

Jules Guthridge and Mr. F. J. Stevens of Bethlehem, Pa., have exchanged places for a few months. The latter gentleman wears a diamond pin, and signs Sv.

Henry Watterson, of the Louisville *Courier Journal*, visited the operating room last week escorted by Vice President Green. Henry is a subdued blonde.

An instrument designed for service upon way wires, and known as the Phantom Duplex, is being tested here. Denis Brown and Dave Findlay are the team upon it.

It is rumored that Miss Snow, late genial manageress of the ladies' department, has taken charge of an outside A. and P. office. Rumor does not, however, say where the office is.

On and after to-day, the Post-office in the Western Union building, this city, is to be abolished. Mr. Holmes, the mail agent, is to act as usher at the executive offices, third floor.

We feel ourselves authorized to say that the gentleman who announced himself as a member of the New York bar at the Insurance meeting last week, was not George, the Count Joannes.

Our Canadian friends have rather an extravagant idea of operators' salaries here. For their benefit we will say that when a man makes \$80 per month all told, he is doing remarkably well.

One of the ladies says that lady operators never become "old timers." Now that this important matter is settled, we do not see any good reason why general business should not at once improve.

Mr. William H. Hoyt has worked in the main office of the Western Union Telegraph Company in this city for fourteen years. His reputation as a gentleman and a telegrapher has never been excelled and seldom equalled.

The operators in this office who were among the original charter members and are now in good standing in the Telegraphers' Insurance Association, are Thomas P. Scully, holding certificate No. 8, Joseph Knittle No. 13, Thomas Allen, No. 26, Thomas J. Landy, No. 75, and R. H. Morris, No. 80. Perhaps no individual member contributed more to the success of the Association than Chief D. R. Downer, holder of certificate 12. Jerry Brist held certificate No. 1, but he has allowed his policy to lapse.

The New York Wire Club.

"Life is a comedy to him who thinks."

Jerry Horst rapped for order amid much enthusiasm. He supposed that very few of the members present had seen the last issue of *The Journal of the Telegraph*. In it was the announcement that Colonel Wilson had reorganized the Chicago office by appointing thirty chief operators to assist the management. (Applause and cheers.) Mr. Weller said he believed he would go to Chicago at once. Mr. E. F. Walsh said he preferred to work under a fewer number of officials. It reminded him of a company of soldiers raised in the South during the late unpleasantness, which consisted of ninety-nine brigadier generals and one private. The poor private died of excessive drilling. (Laughter, hisses, cheers and confusion.) John Moffat took an entirely different view of the matter. The fact that an effort was being made to instruct and elevate the operators was an evidence of the moral progress of our race. (Applause.) Dennis Brown did not exactly understand the force of Mr. Moffat's remarks, but stated that he had heard that a missionary chief was detailed to watch the movements of the boys. If any were seen going in the direction of a saloon the chief took them gently by the hand and led them into the presence of the assistant manager, who talked quod to them. (Laughter.) Tom Allen said that he was glad to see that the boys, like the prodigal son, were becoming tired of the swine's husks at last. Fred Baldwin hoped that before the meeting adjourned those present should have the pleasure of hearing from Mr. O'Reilly. Mr. O'Reilly bowed, and said that, to use the language of one of his conveniences, "it isn't speechless I am, fist, but I don't know anything to speak about. (Great applause.) The meeting then adjourned.

Philadelphia Items.

Hon. George L. Harrison, ex President of the Board of Public Charities, of Pennsylvania, was among the recent visitors to the operating room of the new main office. None are more welcome, because none more appreciated, than our public spirited merchants. The indomitable energy which they throw into mercantile life, is also sometimes directed toward telegraphy, and they become desirous of acquiring a familiarity with the telegraphic world with which they are so intimately concerned. The friendly feeling is heartily reciprocated by the craft, and results in just such harmonious workings as best conduce to the interest of merchant and telegrapher alike. The Grand Jury of Philadelphia County has found a true bill against Emanuel Scherwin, alias Chas. Sterns, for forgery and misdemeanor. This is the same party that was arrested in St. Louis by Jones, of the money transfer department, for attempting to swindle by means of forged telegrams. It is understood here that if St. Louis justice is not strong enough for him he is to be taken to Toledo, Ohio, Philadelphia, Baltimore and other places, where he has been practising the same game. H. C. Robinson, W. P. Wheatland, John Wintrop and S. S. Garwood, transfer agent, delegates to the annual meeting of the Telegraphers' Mutual Benefit Association, returned home on Thursday last, looking heavily as bucks. Their constituents are perfectly satisfied with their action at the convention. James S. Nelson, of the St. Louis office, is making a short visit among his Eastern friends. For the benefit and edification of a portion of New Jersey and Eastern Pennsylvania, the Edison telephone was, last Saturday night, attached to a number of way wires branching out from the Philadelphia Western Union main office. Messrs Chas. Moore and W. D. Black were called upon to furnish the vocal music, and ably did they discharge that duty, and to the entire satisfaction and delight of the operators who happened to be lingering in their offices. Mr. Fox, of the Associated Press, at Baltimore, was particularly edified, and asked for numerous repetitions. The many friends of James G. Boyce, who last summer was transferred from Philadelphia to Lake City, Fla., at his own request, will be pained to hear of his death, from consumption, at the latter place. His remains were interred at Lake City. Mr. Boyce worked for many years in Philadelphia and neighboring towns. Josiah W. Dyer, manager of the Western Union Branch office, Third and Chestnut is out in a card offering to accept the position of Superintendent of Fire Alarm and Police Telegraph, providing Congress will permit him. A number of changes have taken place in the A. & P. office of this city. Julian Soule, the manager, has

retired from the business. James M. Maxwell, from the office in the Maritime Exchange, has been transferred to the main office, Third and Chestnut. McLoraine and three other operators (names not known) leave the service November 30th.

Boston Notes.

For several weeks past we have been deluded into the belief that we were going to have a new office. It has been decided, however, to remain in the old building, enlarging the operating room, and giving it a general renovation. Night manager, Edwin F. Leighton, has been elected to the State Legislature from the 7th district of Massachusetts. Mr. Thomas M. Daly has been transferred from 109 State St. to the Western Union office, Rutland, Vt. Mr. J. B. Gatins, of the district company's office, Hotel Brunswick, being appointed to fill the vacancy. Mr. John T. Stevens returned from his vacation in excellent trim. Mr. E. E. Morrison has gone home to spend Thanksgiving, Mr. W. L. Waugh, of Toronto, Ont., filling his place on the Buffalo quad. Mr. J. J. C. Wilson sends eastern report, and very pretty Morse. Mr. Warren E. Tice, late of Newport, R. I., has accepted a position on the day force, 109 State St. He signs "Lo," and is considered a fine operator. Mr. George D. Colegrove has been transferred from eastern report to the Buffalo quad and a day tick. Charles Pond works the Providence circuit, days. Stanford and McMahon work the Portland duplex, days. Messrs. Beardslee, Davin, Hoogs and Shorey work the New York Morse quad days, and Messrs. Williamson and Read nights. "Billy" Kettles superintends business on the Philadelphia quad days. Mr. W. J. McClure, who has been on the sick list for several weeks, resumed duty last Tuesday. "Fatty" Thomas, our "Dutch comedian," performed Mr. McClure's duties during his absence. Mr. E. G. Read is called the "handsomest man" in the office. Grandy got the delusive idea into his head that he could beat Shorey playing billiards, but a little actual experience in that direction convinced him that he was wrongly informed. Mr. Frank Glidden is working on the night force. Mr. J. A. Elms has been transferred from "Ch." office, Kilby St., to "Bn" office, Old State House. Messrs. E. A. Beardslee and E. F. Leighton, were delegates to the T. M. B. Association. Miss Ella Jenkins is manager of the W. U. office, South Boston.

Arizona Signal Service Items.

We scan in vain the columns of your ever welcome and neat little paper for a few brief remarks touching this distant and by no means comfortable quarter of the great U. S. The enjoyments of life and the conveniences of civilization are not, to military operators, supposed to exist. They are known only as they float in upon our dreams, and as something once possessed, but now, alas, gone. Lieut. Phillip Reade, our worthy superintendent, though unfortunately not himself a practical telegrapher, deserves credit for the effort he makes to render the condition of the operators as pleasant as possible. Notwithstanding the wastes of country it traverses, and the scarcity of stations, many of which, moreover, are valueless as a source of revenue, this line bids fair to sustain itself in good shape in the near future. J. K. Ramos, a peculiarly sensitive young man officiates at S. D. Fred C. Kelly, of Campo, a gentleman of means and a family, is energetically unearthing miles of line in the shifting sand hills. Geo. V. Phillips is retained with his lightning driving apparatus in the D. Q. M's. office as ballast. He appreciates coral life, but goes to Tucson soon. W. J. Dailey "smilingly" performs his arduous and "several" duties in a nervous manner. At Maricopa Wells, the repeating station, I. R. Birt is *au fait* in his knowledge of leverage. He is ably assisted by Will C. Barden, formerly of Tucson. The latter anticipates an eastern trip at an early date. It is not known for what purpose, but rumor says that it is to obtain a knowledge of the "duplex system." W. E. Guild tenaciously holds his own at Florence. Business is increasing rapidly at that place. Tucson glories in our chief operator, W. T. Blythe, who soon relieves Phillips at Yuma. Mr. Blythe is conscientious and obliging, but has yet to learn that the good will of the operators saves much trouble and confusion. C. M. Clarke is the assistant. J. J. Falvey at Grant, repeats for the Apache division. Messrs. White and Boutelle are at Goodwin and Apache respectively. J. W. Harrison at Bowie is a good boy and worthy of suc-

cess. J. J. Nanry is at Phoenix. H. A. DuSouchet, well and favorably known in the South, is at Wickenburg. J. H. Hunter, late of the C. P. R. R., has charge of the Prescott office. He is well-liked and understands his business. Wm. Baber buoyantly fingers the brass at Verde. NON SIGNAL.

FOUR PEAKS, Arizona, Nov. 11.

A Wonderful Electrical Machine.

An appliance for the prevention of fires has recently been introduced into the St. George's Hotel, Philadelphia. This machine was, the other night, made the subject of a practical joke test by a party of young men, headed by a young naval officer, who, in their desire to perpetrate what they no doubt looked upon as a practical joke, did not consider the serious results that might have ensued. The new apparatus, which the Ward Brothers have introduced in their hotel building, affords instantaneous knowledge of high temperature in every apartment of the house. When the heat rises above ninety degrees a bell rings behind the office desk, and rings louder as the heat grows greater. From a large water-tank situated on the roof that portion of the building in flames can be instantly flooded with water. With gleeful smiles the leader of the jovial party applied a lighted match to that portion of the apparatus connected with the room in which they were located, and instantly the bell in the office rang out vigorously, the members of the fire brigade rushed to their allotted posts, and the water poured in upon the nice young men, dampening their spirits and their clothes, and drenching the carpet and furniture. The lady guests ran screaming from their rooms, the once smiling youths swam out from the apartment, squeezed their streaming clothes, and tried hard not to look foolish, and failed most admirably. Matters explained, the threatened panic was averted and the damp young men stood before the clerk's desk, little rivulets streaming behind them, while a nice little bill of damages was made out for the practical jokers to liquidate.

"Oakum Pickings."

This work is a spicy collection of stories, sketches and paragraphs, contributions by the author to the telegraphic and general press now published in book form. They make a very interesting volume. The reading of these effervescent sketches of fun and frolic, of humorous scenes of life, of incident of travel, will quickly restore drowsy human nature to its liveliest condition. A fine steel plate engraving of the author embellishes the book, and the stories are so attractively written that the reader seems to be a witness of many of the incidents related. It is a lively, enjoyable publication. — *N. Y. Hebrew Leader*.

A Monument to Miss J. J. Schofield Proposed.

THE OPERATOR is ever a welcome visitor to my office, and I feel that the contribution "Wooring by Wire," by Miss Schofield is worth many times the cost of it. It seems to me that when an operator reads that contribution and thinks of the sad fate of its author he must drop a tear to the memory of an unfortunate sister. I for one—and I believe I am only one of a thousand—would be glad to do something more substantial in regard to her memory than merely dropping a tear. Why cannot each of us contribute a dollar and erect a beautiful monument to Miss Schofield's memory? It would be very appropriate to place it where she met her sad fate, where it would be seen by people from all parts of the world, and not only be a just tribute to her memory but speak, well for the fraternity.

MIDDLEPORT N. Y., Nov. 16th.

D. J. T.

THE final splice in the Direct Cable was completed November 15th, at 2 P. M. After proceeding to Rye Beach Cable Station, and testing it, the "Minia" left for Portland, where she is to be docked. The "Minia" is an English vessel, belonging to the Anglo American Telegraph Co., and carries 83 men all told.

THE neatest and most appropriate holiday present that a telegrapher can make, either to a person in or out of the profession, is a copy of "Lightning Flashes." Prepaid to any address for \$1.50.

PERSONALS.

Mr. Chas. Willis of New York, but more recently of Buffalo, works the Buffalo quad in the Detroit W. U. office.

Mr. E. A. Teupser, Western Union night man at Harrisburg, Pa., was married November 15, to Miss Mary E. Scott, of Gettysburg.

Mr. A. P. Danforth has resigned his position in the A. & P. office, Detroit, and gone over to the Western Union in same city. He works the Chicago quad.

Mr. Chas. E. Gray of the W. U. office, Titusville, Pa., desires to ascertain the address of George P. Gist, formerly of the A. & P. at Oil City, Pa. Can some reader of THE OPERATOR accommodate him?

Mr. Perry Chamberlain writes to say that the mistake Will C. for Willie, credited to him by our Albany correspondent X Y Z was made by another man, and that he, (Mr. Chamberlain) was not "discharged" from the Albany N. Y. C. R. R. office, it being his own choice to leave.

News comes that Mr. Charles R. Swayze, formerly manager W. U. Office, Pittsburg, Pa., and at present operator for the same company at Hillsdale, Mich., has taken charge of a plug factory in the latter place, and is sending out fifteen to twenty graduates every year. Mr. Swayze and his victims have our sympathy, especially the latter.

The following artists handle the business in the Western Union office at Kansas City, Mo.: T. G. Rowan, C. G. Wright, J. R. Magill, D. E. Martyn, C. M. Davis, T. E. Wilson, W. L. Angle, P. Brady, Fannie Wheeler. Night staff consists of M. M. Bond, chief, J. E. Story, L. D. Stanley, James Gillespie, F. H. Biers. M. D. Hood is manager, and W. H. Woodring, chief operator.

The following pleasant note is from the young lady manager of an office in New Hampshire:

"I am a subscriber to your valuable paper, and have long desired to aid it and myself in some way. While I do not believe that I could write an article fit for publication, I might perhaps be of use in some other way. For instance, in giving you an occasional item of news, if I knew just what would be suitable. I trust, however, that I have not been useless in getting a few subscribers. I have improved every opportunity to speak a favorable word for the paper, and shall continue to do so."

G. H. & H. R. R. TEXAS.—Beginning at headquarters, Houston, we have J. W. Holoway as T. D., A. Perrin, asst. (nights), N. B. Curtis at Union depot, and Jos. H. Blumenthal as operator and freight receiver. At Harrisburg, first station south of Houston, and Junction G. H. & H. R. R. & S. A. R. R., Mr. Gallagher does duty, both as operator and ticket agent. At Dickerson, Mr. J. H. Kelly acts as operator and agent. Reaching Galveston we have Mr. G. W. Herndon as owl, at freight depot, and E. L. Haviland day man at Union depot. Ed. hopes to be secretary of the road the some day.

FLORIDA.—Mr. Gary, who is overhauling the J. P. & M. R. R. wire, is about half through, and it already bums like a top. "Yellow Jack" has been raging in Fernandina since about middle last August. Messrs. Clarence Maxwell, Dick Dozier, and Tucker, operators, had the fever, alternately, but recovered. A twin brother of Mr. Maxwell died of the fever. There are a few sporadic cases of the fever in Jacksonville, but being so late in the season it is not likely to spread. John Coyne and Frank Hernandez "would hold the fort," should it be ever so bad. There is not, to our knowledge, a lady operator employé in this State; just think of that "hyenas."

NORTH SYDNEY, C. B.—Robie McLearn has been transferred to Halifax, N. S. Mat Scanlan has gone to the country of his birth, Newfoundland; and we have in their places F. H. Cleveland, from St. John. N. B. and H. A. Black, from Calais, Me., both fine fellows and skillful operators. Temperance is all the rage here now. Jim Edgar wears Banks McKenzie's blue ribbon, and vows he will stick to it. We can do fast work here too; Tom McDonald received 80 cables and 3 service messages in an hour, pausing between each to repeat the figures and the first word in address! Sam Bailey, Heart's Content, was the sender. Business is pretty good, averaging 800 to 1000 cables a day. One thing we all complain of is that THE OPERATOR doesn't come often enough. It seems to be a long time between them.

OSKALOOSA BRANCH, C. R. I. & P. R. R.—H. W. Fisher is agent of the above road, and John Fleming operator. A. J. Durr is agent for the I. C. R. R., and Frank Edson day, and Tom Mahoney night operator, while Miss Mollie Hughes manages the city office, J. E. Wilson is agent at Knoxville, and J. R. Keefe operator, D. L. Casey has charge of Olmet, B. H. Harding of Rose Hill, A. H. Heber of Delta, J. O. Baird and H. A. Seawons of Sigourney, O. M. Hurlies of Harper, A. L. Lindner of Keota, G. W. James of West Chester, Messrs. Harvey, Parker and Riffenburgh of Washington, Mr. Woodward of Amesworth, M. H. Truesdell and Mr. Young of Columbus, J. D. Vandyke of Frederick, L. W. Gates of Ononwa, A. O. Warfield, and Messrs. Gould Warfield, and H. B. Bosworth (city office) of Muscatine, Messrs. Ring, White, Stevens and Davis of train dispatchers' office, B. W. Brown, Durant, Geo. M. Peck, Walcott.

We read THE OPERATOR and enjoy it, have read Lightning Flashes with pleasure, and Oakum Pickings will always find a place on our table if only for that one piece, "Departed Days."

"DON."

WIS. VALLEY R. R. ITEMS.—Numerous changes have occurred since the last W. V. items appeared in THE OPERATOR. Miss Kate Townsend is operator at Wausan commercial office. L. W. Davis is agent and operator, and C. W. Perry, clerk at Wausan. C. J. Cawley is agent and operator at Schofield. Jas. Busfield at Mosinee. A. E. Roberts at Hutchinson. G. E. Oster at Junction City. T. E. Nash is agent at Fort Edwards. S. F. Stoughton at Remington. F. E. Blazer is at Valley Junction. G. H. Warren is agent at Tomah. L. M. Nash is agent at Centralia, with J. Byrle as clerk and operator. E. N. Botsford is operator in general office. D. C. Cheney is day operator, and G. S. Porson night operator at Tomah transfer.

The W. V. R. R. is 90 miles long, has 10 regular stations, 12 telegraph offices, and two stations, where the agent and operator is employed by lumber company's. The road runs into the Wisconsin pinery. Lumber is the principal commodity. The general offices are situated in Tomah.

ANON.

ATLANTA, GA.—Phil Holcomb, who has been in the city office here for nearly ten years, was married Nov. 6th, to Miss King of this place. Phil is well known to the "old timers," as the "pressman." He is the "printer's delight." Jim Stephens, the fast man, has been here some eight years, and owns much real estate. He is the "evil genius" of second class receivers. R. O. Camp, eight years in this office, still delights to "sush em." R. E. Alston, for five years in this office, occasionally delights in the sweet notes of the guitar. Mr. Herrick, the manager, is ever watchful of the company's business, and popular with his men. J. E. Ralston keeps the records of the office, and is the owner of a farm and big mill. Mr. Witt is receiving clerk. P. E. Murray is wintering here, and the only single man in the office. He says 'twill not always be thus. Chas. Bearly is train dispatcher on the W. & A. R. R. A good man in a good place. He is assisted by Mr. Gable. Mr. Osborne is at Central R. R. Mr. Turner at Ga. R. R.; and Gus Foreacre answers S. at air line. It is doubtless well known that Jack Riley, "Stunf box," and Less Bradley, "shoot em," are in Chattanooga. A number of the boys are on the loaf down here. Salaries are almost at a starving rate. The cry is, stick to it, boys, stay while you can, for it's ten dollars less for every new man. We all wish THE OPERATOR unbounded success.

CHICAGO NOTES.—When I last wrote, the enlarging and remodeling of the Western Union office here had been almost completed. Since then this happy result has been accomplished. Considerable changes have also been made in the staff, by the appointing of a number of new chief and assistant chief operators. Of course there were not wanting those who, when the arrangement was first put in force, "were sure it would not work," but recent developments have proved that it will, and does.

Although you hear very little of us as regards improvement out this way, you must not take it for granted that we are sitting idly with folded hands. We have our "Telegrapher's Mutual Improvement Class," composed of the representative day men of the W. U. office, and the S. A. E. K. club, composed of the same kind of men on the night force, who meet every two weeks to study up duplex and quad intricacies; the day men evenings, the night men after noons. This class and club have been in operation about three months. The monthly meetings of the American Electrical Society are becoming more and more interesting. A number of the old

timers who can't stand prosperity have been with us lately, prominent among these was Mr. Hank Cowan. He worked about ten days. The W. U. Co. is now working a polarized duplex between here and Salt Lake, which is said to work "foine."

OCCASIONAL.

BURLINGTON, ONT.—G. W. R. NOTES.—No doubt you will be pleased to hear that your spicy little paper, THE OPERATOR, and also "Lightning Flashes," have found their way to our quiet Canadian village, and are already great favorites with us. We all feel obliged to Mr. Walter Grayson, the gentlemanly operator in charge of the G. W. R. R. office here, for introducing them. Burlington is not behind this go-ahead age, as far as telegraphic offices are concerned, there being five—the Montreal office, in charge of Mr. Thomas Graham, our worthy village clerk; the Dominion office, where the genial Postmaster, Mr. Walter Bastedo, is always on hand; the "Brant House," with Mr. W. Kerns, better known as "Rocky Mountain Bill;" the G. W. R. R. office, where Mr. Grayson, a "sound" man, attends to "orders" and lust, but not least, the H. & N. W. R. R. office, where can be found the smiling face of Mr. Walter Evans, the pet of our Burlington lassies. The boys have been alking of sending Walter to Handy Hill, to try and "cut out" the hardware man, and see what chance a brave Canadian lad would have to gain the affections of fair Helen. I feel sure that although living as we do in this far-off land, amid the ice and snow of Canada, she and other bonnie lasses will find in our pine-built homes hearts as warm and true as those on the shores of Silver Lake, and should any of your fair readers sigh for a glimpse of this "fair Canada" of ours, be sure and let them know that here are boys, quick of eye and strong of arm, who would only be too glad to show them the beauties of our homes and as our sleighs, with their merry, jingling bells, go gaily o'er the snow, try and persuade them that our rough, Canadian hearts can love as well and true as those of our brother operators in the land of the Stars and Stripes.

BURLINGTON BOY.

BIRTHS.

Nov. 17, to S. S. Stentaford, operator Heart's Content, N. F., a son. Nine pounds.

Nov. 11, at Fordham, N. Y., to Thomas B. Hynes, operator, a daughter. Weight ten pounds.

DEATHS.

HERNDON.—Nov. 15, at Galveston, Texas, Bennie son of George L. and Ophelia Herndon, aged thirteen months.

LEBARRON.—Nov. 14, at Pensacola, Fla., James F., youngest son of C. L. LeBaron, President Pensacola Telegraph Company, aged eighteen years.

MARRIAGES.

HOLCOMB.—KING.—Nov. 6, at the house of the bride's parents, Mr. Philo Holcomb to Miss Rebecca King, all of Atlanta, Ga.

PERRY.—BRANT.—Oct. 3, at the residence of the bride's parents, Canton, Ill., by Rev. P. Warner, A. D. Perry, an old operator of the C. and A. R. R., Pontiac, Ill., to Miss Effie A. Brant.

CURRY.—FOX.—Nov. 11, by the Right Rev. Bishop Cheney, of Christ Reformed Episcopal Church, Mr. Thomas Curry, Jr., to Miss Jennie Fox, both of the Chicago Western Union main office.

BRADY.—HOUSE.—Sept. 20, at the residence of the bride's father, Fountain Head, Tenn., Mr. Edward Brady, Manager Western Union Telegraph Office, to Miss ——— House, eldest daughter of the Hon. John House, one of Fountain Head's most respected citizens.

CLAWSON.—HAGLIN.—At the Catholic Church, Marshall, Texas, L. H. Clawson, train dispatcher, T. and P. R. R., to Miss Ida, daughter of J. A. Haglin, master mechanic same road.

STORMS.—EVARTS.—November 22d at the residence of the bride's parents, by Rev. James H. McGahan, Mr. Wm. J. Storms, of Richmond, Texas, to Miss Jennie E. Everts, of Mexico, N. Y.

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H. VAN HOEVENBERGH; Miss L. A. CHURCHILL, ETC.

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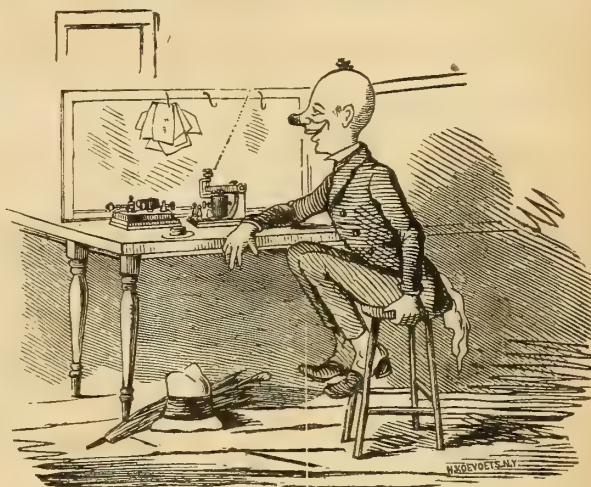
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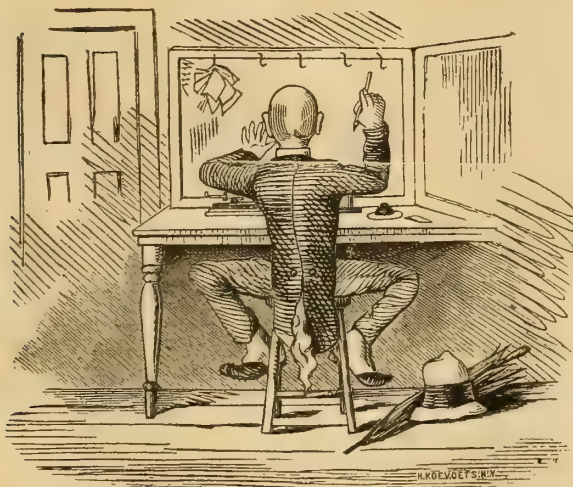
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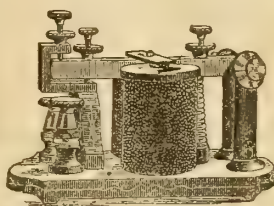
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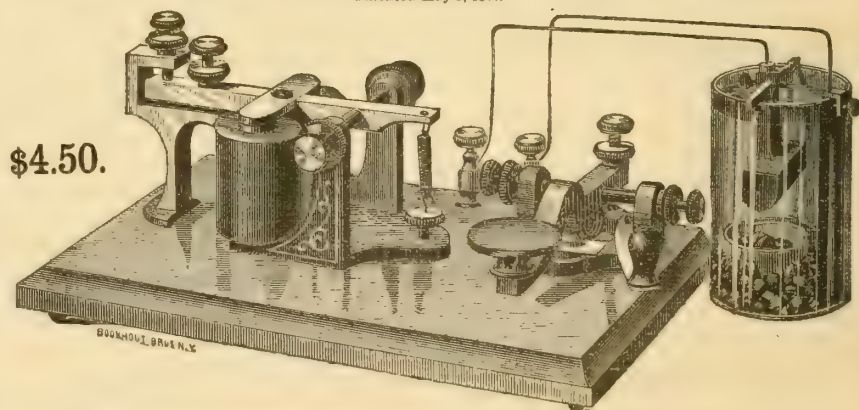
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VOL. VIII.

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No. 8

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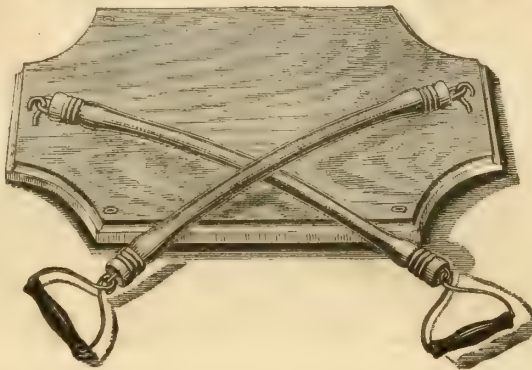
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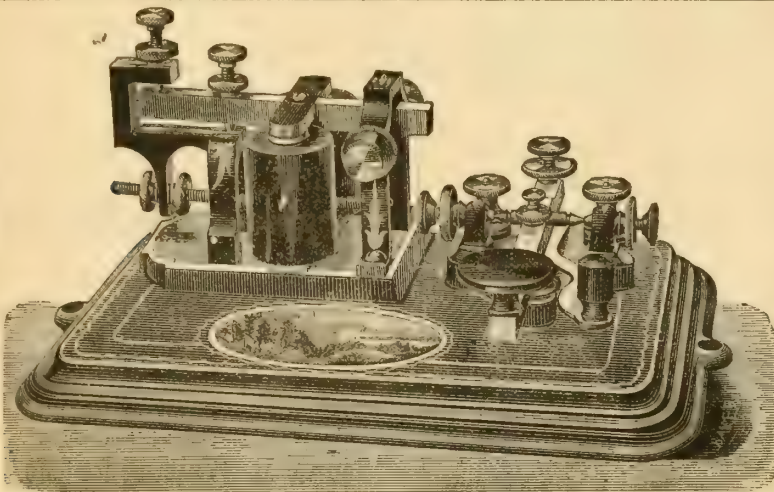
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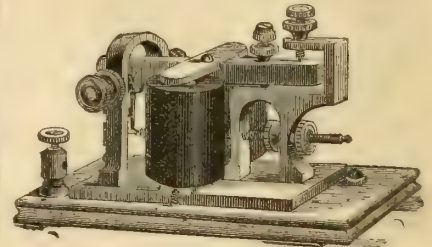


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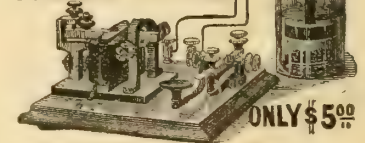
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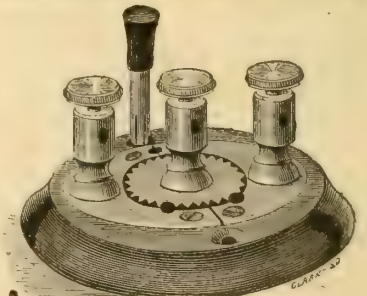
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Complete outfit.....	Money in advance, \$5.00
Instrument without Battery.....	4.30
" Wound with finer wires for lines of one to 15 miles.....	5.00
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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

December 15th, 1877.

Volume VIII.

Whole No. 92.

The Telephone.

FIRST VOICE.

Hark! I hear an angel singing—
Singing through the spheres,
Mellow zephyrs softly bringing
Music to mine ears.

SECOND VOICE.

No, you booby, that's no angel—
Can't you tell the tone?
That's the latest queer fandangle,
Called the telephone.

Chorus: Stop your growling now, ye husbands,
Wives, preserve your tone,
For the whole world now can hear you
Through the telephone.

THIRD VOICE.

There's a man in Jersey City
Beating of his wife,
Hear her yelling; she is gritty—
Hear her fling a knife;
Listen to her cries of murder,
Hear his savage tone,
We can count the blows and murmurs
Through the telephone.

Chorus: Stop your growling, you Goliath,
Stop your squalling, Jone—
For the whole world now can hear you
Through the telephone.

FOURTH VOICE.

Oh, is that the what-you-call-it
That brings far things near?
Well, I've got a girl in Texas,
Will it bring her here?

SECOND VOICE.

No, but you can play it on her—
Test her love's true tone—
By just bringing all she says there
Through the telephone.

Chorus: Stop your flirting now, Johannah,
Stop your fibbing, Jone,
For we now can keep well posted
Through the telephone.

FOURTH VOICE.

If she's flirting with another,
Can I find it out?
If she's sassing back her mother,
Can I hear her shout?

SECOND VOICE.

Yes, and if she's fooling you there—
If she asks a loan—
You can find out all her capers,
Through the telephone.

Chorus: Stop your capers now, young damsels,
You must live high tone,
For we've got you cornered nicely
By the telephone. T. M. D&H.

Making A Heroine.

BY MISS L. A. CHURCHILL.

CHAPTER III.

"A combination and a form indeed,
Where every God did set his seal,
To give the world assurance of a man."

SHAKESPEARE.

Ralph Percival was a handsome young man, although dissipation had marred his beauty, giving to his face a careworn expression. His figure was well formed and muscular. The evil habits into which he had fallen had not taken from him his elastic tread, nor a certain polished air which was very attractive. Twenty-six years had passed over his head, when Lena Chester made his acquaintance, but he looked as though they had numbered thirty. His thick, heavy hair was very dark, almost

black; his eyes, too, were dark, and wonderfully handsome; his skin was not quite olive, neither was it white; his forehead was high, and a heavy moustache covered his upper lip. I think no one could be in his company and not feel the charm of his manner. He slipped quietly into his place in the office, and his coming did not make the difference in Lena and Arthur's happy times that they had feared it would. He was so gentlemanly, kind, and considerate, that it was hard to realize that he was a man who had taken up work to keep him from yielding to temptation and sin.

His memory was fine, and his descriptive powers actually brilliant. He had traveled much in both the Old World and the New, and often, when business was dull in the office, and both pupils tired of practicing, Lena's eyes would sparkle, and Arthur's sallow face light up with pleasure as their new friend talked of places they longed to see. In imagination they were sometimes on the Rhine, enjoying its grand and picturesque scenery with him, again they were in sunny Florence, taking in deep draughts of beauty amid its pictures and statues; anon they were wandering in the streets of exhumed Pompeii, now climbing the rugged sides of Vesuvius; again sailing over the glassy surface of magnificent Naples' bay. So absorbed would both speaker and listeners become, that the office call would sometimes sound repeatedly before any of the three would heed it.

Ralph Percival will never forget the quiet days which followed each other in quick succession, when he battled manfully with the strong appetite that continually called for the fiery poison to which it had become accustomed. In those days a strange unrest took possession of Arthur Ainslie. He felt that he could never again go back to the life he had been leading. His soul was stirred within him, and he heard constantly a voice saying, "Go work in my vineyard." But his thoughts did not find utterance, and he went on for a time in his usual way, reading, practicing, and dreaming. Six weeks had passed away since Ralph had commenced his telegraphic studies, when one morning Lena and Arthur occupied the office alone. The hours of the forenoon passed heavily away, and Ralph did not appear, and the afternoon failed to bring him.

Lena insisted that he must be sick or away on business, but her face wore a troubled look, as hour after hour went by, and there was no tidings of her absent pupil.

Just as the sun was setting, Arthur strolled into the waiting room of the depot, and going to the window looked out upon the street. Just then a carriage containing three men was driven rapidly past. All of the men were evidently much intoxicated, and swayed from side to side of the vehicle. The one driving was Ralph Percival. From her window Lena saw and recognized him.

Arthur turned toward the office, but unconscious that his eyes were upon her, she covered her face with her hands, and a sharp moan broke from her lips, which lost their pink hue, and for an instant became deadly pale.

A moment later a musical voice said:

"Did you expect him to become entirely cured of his great fault, and never once fall back?"

"I suppose it was foolish of me, Arthur, but I did dare to hope it might be so. Oh, my dear boy, do you think it will be possible to save him at all?"

"We can work and pray," was the reply; but, somehow, Arthur could throw but little warmth into his tone, for Lena's grief had sent a pang to his heart, and caused him to care less for Ralph Percival's reformation than he had an hour before. But from his large, tender heart he pitied his teacher, and when, seemingly unconscious of his presence, she bowed her head, and in an earnest, supplicating voice, said: "God in heaven help him," he uttered a fervent "Amen." Later, when the twilight was becoming darkness, he wrapped her shawl tenderly about her shoulders, and walked quietly by her side, as she went to her boarding place.

As they were passing the St. Charles Hotel, they heard loud voices, shouting in drunken glee, and as they drew near, one of the rioters said:

"Fill up your glasses, boys, and we'll drink to the fair operator who has had our friend Percival tied to her apron strings so long."

Lena shivered, and clung closer to her companion, who, somehow, never seemed so manly to her before as he did then.

When she was at home, he whispered: "Don't despair, Miss Lena! God is good and just, and has He not said, 'Ask, and ye shall receive?' Good night."

The words soothed and comforted her, and the

people whom she met at the tea-table could not have told by her countenance or conversation that anything unpleasant or unusual had transpired.

Arthur's was the sadder heart of the two, as he bent his footsteps toward his palatial home. But he remembered his own words, "God is good," and tried to pray that He would help him as well as Ralph Percival. In an office five miles below Lena's, a violet eyed girl waited long and anxiously for the good night, and the usual pleasant words which heretofore had always come to her and sent her home happy and hopeful. The stars came out in the blue sky one after another, and still she sat by her table, with her hand on the key, ready to respond when Arthur Ainslie should call her as she doubted not he would. Alas! Berty, your sweet face had no place in the thoughts of one who each day was becoming dearer to you, but who never dreamed that you gave to him more than a friend's regard. Eight o'clock struck, and still she lingered.

Her young brother came to inquire if she was too busy to come home, and returned home grieved because sister Berty had spoken petulantly to him. With a sadly disappointed feeling she followed him, but she was so silent and abstracted during the remainder of the evening, that her mother wondered if her child was well, and sighed as she thought, with her husband's small income, and large family, how necessary it was that Berty should confine herself steadily to her office.

CHAPTER IV.

"River, sparkling river, I have fault to find with thee;
River, thou dost never give a word of peace to me."

HOLLAND.

I doubt if ever a person felt more heartily penitent, or more thoroughly ashamed than did Ralph Percival on the morning succeeding his day and evening of his dissipation. As he was opening one of the windows of his room he saw Lena Chester passing, and shrank back like a guilty thing. The early day was glorious, but he heeded not its beauty. He felt faint and sick, and half staggering back to the bed, he lay down upon it, cursing himself for the folly which kept him from his study that day as it had the day before. His head ached severely, and through his parched lips there came many a groan, wrung from him by bodily pain and mental suffering. What will Lena Chester say? Will she quietly inform me that I am not to continue my studies under her tuition, or give me another trial? These questions repeated themselves again and again in his mind. Weary with thinking, he at last slept, a heavy, dreamless sleep, from which he did not awaken until nearly five o'clock in the afternoon. The pain was gone from his head, and his brain was clear. Rising, he dressed himself with scrupulous care, for he resolved to put an end to his suspense by calling at Lena's office at once. After partaking of some light refreshment, he went forth into the June sunshine, and a few minutes' walk brought him to his destination.

Lena was writing for Arthur to copy, but at the sound of footsteps she turned toward the door, and there was a glad look in her eyes as she rose to greet her pupil. She held out her hand. "We have missed you, Mr. Percival," she said in her low voice. "You are very welcome."

"Yes, very welcome, sir," repeated Arthur, as he took the hand which had held Lena's an instant before.

"I am painfully aware that I deserve only coldness, and no welcome from either of you," replied Ralph, sinking into a chair. "But I beg that you will listen while I confess my folly and sin. I vowed when I came to this office as a pupil, that I would never again taste intoxicating drink, and until yesterday I have kept my word. At the St. Charles, as at nearly all hotels, wine is used as freely as water, but I have never quaffed a drop of it since I knew you before until yesterday. Harry Clark has always been my evil genius. Somehow, he constantly keeps track of me, and many, very many times have I fallen when he has tempted me. Yesterday he sought me, and, maddened by his sneers, I drank, thinking I would take but one glass, but that glass led to many more. He brought a friend with him who seemed even worse than himself. It was weak, cowardly, unmanly in me to yield, but I did. I should like much to go on with my telegraphic lessons, but I feel that it is too much to expect you, Miss Lena, to allow me to do so here. If you can forgive me for abusing the confidence you seemed to place in me, I shall be grateful, and know that that is more than I have a right to ask."

"What am I, that I should condemn or judge you? If you have proved yourself weak, that is

a potent reason why you should have help. Shall we not commence anew, to-night, Mr. Percival, and forget what is past, or only remember it to help us in the future?"

This was Lena's answer.

"You are magnanimous, and can never know how I thank you. For your sake, and my own, and that of my gray-haired father, I will reform, with God's help."

"I do not believe you will fall again. I shall be so disappointed if you do," Lena said.

"You shall not be disappointed."

She looked in his face with its calm, decided expression, and felt that he had spoken truth; that she should not be disappointed.

"I will trust you," she simply said.

"You surely may, Miss Lena."

A pause—unused, during which Arthur Ainslie, who had been a silent spectator of the scene, after he had spoken to Ralph on his entrance, secured his hat, and stole quietly out of the office, and the depot.

Across the verdure covered meadow which lay broad and green back of the station, he wandered, until he came to the river whose waters washed its borders. A mass of golden-hued clouds gleamed in the west where the sun was going down; the evening air was soft, cool, and delicious; a bobolink warbled forth her song from a tree a few feet from him. But his beauty-loving eyes did not notice the splendor of the sunset; he was not conscious of the fact that the breeze blew so coolly across his heated face; his music-adoring soul took no note of the beautiful bird strains. Down on the grass he sank, and covered his face with his white hands.

"It is easy to see how it will end," he muttered. "She will help to redeem him, to make a glorious man of him, and then marry him. What will life be worth to me when she is another's wife? Yet, what did I expect? Surely not that she, the brave-hearted, active girl, could ever love such a worthless dreamer as I. I have, or shall have wealth, it is true, but so has he, and Lena Chester's hand could never be won by gold. Once rid of his one evil habit, and he can inspire, nay command, affection where he will. He has the making of a grand man in him. Just such a man as she adores. I ought to rejoice in this, but how can I, when my heart aches and my head throbs in this manner. But I have promised to do all in my power to assist in reforming this man, and I will keep my word. Oh, Lena, my darling! you think me a mere boy, but you have yet to learn how a boy can love. How her usually passive face lighted up as he came in! Ralph Percival, I wonder if you realize what a treasure is within your grasp?"

The night shadows fell thick and fast. The lonely sounding whip-poor-will's song took the place of the bobolink's music. From the wet grass by the river's brink a figure arose, but it was not the Arthur Ainslie who had thrown himself down upon it, two hours before. Lena Chester would never see the boy Arthur again. It was a man, with a man's resolution stirring in his breast, and a man's heart aching in his bosom, that wended his way toward the village.

Meanwhile, Lena Chester was dreaming bright dreams in her office, pausing occasionally to wonder why Arthur had gone, and without saying good night to her or Ralph. Turning to her key after a time, she spoke to Bertie Pearson, telling her she could say good night only for herself, as her boy had been absent some time. Arthur had spoken with Bertie as usual that morning, and she told herself now that it must be simply forgetfulness, and not neglect on his part, that caused him to leave with no parting word to her.

It is so easy to believe that which we long to have prove true!

[TO BE CONTINUED.]

An Able Lecture on an Important Subject.

During our visit to Europe last summer, we had the pleasure of listening to a lecture by the eminent London physician, Dr. B. W. Richardson, F. R. S., which so pleased us that we determined to bring with us a synopsis, and at some time to present it to the readers of THE OPERATOR. The subject was "The Science of Temperance," the matter being discussed solely from a scientific point of view, and not in regard to what is called the moral side of the question. As exactly one year ago this issue we referred editorially to this subject, the present number seems to us to be a very appropriate one in which to give the synopsis of the lecture above alluded to, which we hope will be read with as much

interest and profit by the readers of THE OPERATOR as it was listened to by the doctor's hearers. Telegraphers, as a class, are young men just starting out in life, and we believe that if they knew just what effect spirituous liquor would have upon their constitutions, few of them would become addicted to its use. It is with the object therefore, of warning them of the risk they run in touching intoxicating liquors, and because we think them intelligent men, who will heed what science has to tell them on this important subject, that we publish this synopsis of the lecture.

Dr. Richardson commenced by remarking that the great argument used on all sides in favor of taking stimulants was that it was wanted for some purpose or other in regard to man. It was never urged that it was wanted in regard to inferior animals; though they might do as hard work and live as industrious lives, it was never said that they required alcohol. His object that night was to show what were the physiological effects of alcohol on the human body. In the course of a scientific life a duty was deputed to him by the British Association for the advancement of science to conduct investigations for them in reference to the action on the human system of certain active chemical substances. In the course of his inquiries, alcohol, which belongs to the ethyl series, came under his hands. Before his time there was a good deal of admirable guess-work on the subject, but it was not real, truthful, scientific work. There remained now only one very important question to be solved as to the action of alcohol on the body. Before describing the action of alcohol he would place before them what might be called the natural condition of things. Suppose a middle-aged man, in good health, not a drinker of strong drinks, that he was not over-fatigued at the time the experiment was being made, that he had for some time before been well supplied with food, and that the process of digestion was in progress, this man would be breathing at the rate of 18 times in the average per minute, and the temperature of the body would be 98.2-5ths degrees on the Fahrenheit scale. The pulsations of the heart of this man would be 72 beats per minute, or in round numbers, about 100,000 strokes of the heart in the 24 hours. If they looked closely into what was going on inside this man, they should see that in the course of 24 hours no less than 500,000 ounces of blood were pumped over the body, and the work done by the heart in that time had been discovered to actually represent the labor of lifting 116 tons one foot high. Suppose they went a little further into the condition of this man, they should find that the organs were all under a calm, quiet action; that the nervous system was quiet, and that the muscular system was trained to be in immediate obedience to the calls of the nervous system; and they should see that there was, as far as possible, the most perfect unity of action in all parts of the body. And if they observed the color of the different parts of the body they should see a certain uniformity even there; and if they turned to the internal organs they should find there a similar uniformity of color. If, then, they directed attention to the man in regard to his mental condition, they should find his desire for food and drinks came on at stated times without any excessive thirst, except under peculiar circumstances; that the desire for sleep came on about eight o'clock in the evening and lasted till about half-past four in the morning. If they could watch that sleep they should see that it was undisturbed by any excessive muscular action and difficulty of breathing, or any painful dreams. If they observed the condition of the muscular power, they should find it balanced in all parts of the body, and if they observed the condition of the mind they should find it ready for emergencies, quiet, steady, and free from all passion. Let them now consider what would be the effects of putting alcohol into such a body in various proportions. He would take different strengths of drink for this purpose, and they should find that there would be four distinct series of changes according to the quantity of the alcohol that might be taken into the body. Suppose they put three ounces of alcohol into the body, that would represent what would be in three tumblers of beer, or in two and a half glasses of whisky (wine glasses), or the same quantity of brandy, or say in four or five glasses of ordinary sherry. Now, observe the changes. In the first place the breathing would be quick—that was one of the earliest effects of the action of alcohol—the breathing quickened from 18 to 24 times per minute. In the next place, the temperature of the body would be increased to 1 degree, or as in some cases to 1½ degrees; in the next place, they should find a wonder-

ful increase in the number of beats of the heart, and a slight increase in the force of each beat. Professor Parks, in one of his remarkable experiments, found in the case of a soldier who had been subjected to this kind of observation, that two fluid ounces of alcohol increased the beating of the heart no less than 8,172 times in the twenty-four hours. One ounce of alcohol increased the beat of the heart by 4,000 in twenty-four hours. No exception took place to this rule, save in the case of persons whose heart was worn out by habitual drinking. They would find, also, that there was a considerable difference in the color of all the parts of the body—the face would be slightly flushed, and the external surface of the body greatly flushed. These effects could be observed also on the internal parts in the same way. Another result was, that the blood-vessels were relaxed, and more blood was present. The increased warmth of the body felt by a person under alcohol was the result of a large quantity of blood being brought up to the heart, and was then exposed to so wide a surface that there was a rapid reduction of heat from the blood, which for a little time increased the temperature. The quicker action of the heart under the influence of alcohol was due to this relaxing of the vessels. Turning, then, to the condition of the nervous system, they should find that the nervous organisms were greatly excited, and in this stage there was often a disposition to cry, or laugh, or talk fast, or think fast, and though there was a certain brilliancy here, he could not say that it was a brilliancy supported from within. It quickly died out, and in a little time the muscular power began to feel enfeebled, and there was not that perfect regularity and government of muscular power which was found in the natural standard man. The digestive power at first was increased, and the vessels threw out a considerable quantity of gastric juice, but this does not last long, and the stomach soon began to feel enfeebled. During this, the first stage of the effects of alcoholic action, some depression was felt in the stomach. He could find no evidence whatever in any line of experiment he had performed, that alcohol entered into the composition of any part of the body. Suppose they increased the dose, they should then have a more decided series of effects; breathing became a labor, the action of the heart began to flag, the temperature of the body to fall—these were the most important effects of the second stage. In this stage the muscular power was reduced nearly one sixth, and there was great nervous excitement. By increasing the dose they arrived at the third stage of the effects. In this stage the heart becomes exceedingly feeble, the temperature of the body fell two degrees below the natural standard, digestion was arrested, the mind became quite irregular, the passions all broke loose, the brain became exceedingly congested, losing all controlling power, breathing became difficult, and muscular power all but lost; the memory was in part destroyed, and the man sank, as they described it, intoxicated, with a tendency to sleep, and to continue sleeping until the elimination of the alcohol took place, and the body gradually came back to something approaching the normal condition. If the dose was increased still farther, the body lay prostrate, the temperature was reduced two and a half degrees below the natural standard; the sense of power was gone, and nothing remained of the man but the breathing and the motion of the heart, which was then independent of the breathing, and the last grain of life rested with the centre of the nervous system in the organisms which governed the breathing power. That was the fourth stage of alcoholic intoxication. In time the body recovered; but a man in that stage had gone through a disease, and he was sure that no living man ever went through that disease without having some physical injury inflicted on some part of the organism from which true recovery never takes place. The question now came before them, was any good performed during any one of these stages? He was sure no matter what opinions the audience might have of total abstinence, or otherwise, they would agree necessarily on this point that whatever good might occur to a man or a woman by taking stimulants of alcohol, the good was confined to the first stage. But it was urged that the phenomena observed as the effects of alcohol were in some way useful, and that they performed some purpose necessary for man to have performed upon him. Persons who called themselves strictly moderate drinkers would say that alcohol was very good, that it produced warmth. Now, it did not produce warmth, but it produced a process which gave the idea of warmth, but caused the radiation of heat from the body owing to the large volume of blood brought up to the surface.

There could be no true warmth produced by a substance which immediately afterward made one cold. Dr. E. Smyth discovered that during all these stages of the action of alcohol the amount of carbonic acid given out when breathing was decreased, showing that the animal fire was lower, and that was another proof that there was no real warmth produced by alcohol. Others said that alcohol was good because it gave them excitement, which they considered muscular power. In fact, it was no such thing. Then, there was another superstition which ought to be wiped away—namely, that alcohol excited the heart to motion—that it cheered and lifted up the heart, and that was considered one of the great faculties of alcohol. In point of fact the extra amount of work done by the heart in 24 hours by those who took a moderate quantity was represented by the power necessary to lift seven ounces 35,000 times. Was it reasonable to suppose that that was good for the heart? Others said that the use of alcohol lifted up the brain and gave it capacity for mental work. He freely admitted that there was a degree of mental excitement of a temporary character resulting from the action of alcohol, but that was counterbalanced by a degree of mental depression and exhaustion which followed, and which far more than took away the good that came from the excitement produced by the alcohol. Regarding the ultimate effects on the brain in the case even of those who took the small dose, every physician would tell them that nothing but injury to the nervous system must take place from the constant strain and excitement caused by even this moderate use of alcohol. Others said it was food because of the effect on the digestive organs. He admitted there was a class of persons accustomed to take alcohol every day, whose stomachs had arrived at a certain stage which require alcohol in order that there might be a sufficient secretion of the gastric fluid to produce good digestion. These parties were difficult to contend with because they felt the benefit and the necessity; but for those who had not taken it there was no such feeling, and even with regard to those who had taken it that feeling was soon got over—in three months it could be entirely removed. He found too, by experiment, that alcohol interfered with the digestive fluid materially, and under some circumstances arrested the digestive process altogether. The doctor concluded amid great applause.

Aerial Telegraphy.

In these days of telephonic wonders, nothing within the range of anything like probability surprises us. Information has recently reached here that Professor Loomis, who has in the mountainous regions of West Virginia for some months conducting a series of experiments with his proposed aerial telegraphy, has finally demonstrated that telegraphing without wires is practicable. His manner of operating described on a previous occasion in this correspondence, has been indorsed by many scientists. It consists of running a wire up to a certain altitude, reaching a particular current of electricity, which, according to Professor Loomis, can be found at various heights. At any distance away, this same current can be reached by a similar wire and communication immediately had. The apparatus necessary to bring about this wonder is very simple and inexpensive. It has been fully ascertained that telegraphic communication does not take place over or through the wires used, but through the ground. This same communication continues when these electric currents supplied by nature are used. Professor Loomis has, as said before, telegraphed to parties eleven miles distant by merely sending up a kite a certain height at each end of the distance, attached to which in place of the ordinary string was a fine copper wire. When both kites, though eleven miles distant from each other, touched the same current, communication was established, and messages sent from one end to the other by means of the ordinary Morse instrument in connection with the instrument invented by Professor Loomis. This showed that the theory on which he had worked for many years was a correct one, and that by the proper means, such as stationary wires arranged from natural or artificial prominences, could be operated successfully at all times. It is true that aerial telegraphy may not be much of a certainty during violent storms, or electric showers, but it will not meet with more obstructions than the ordinary wire telegraphing, which is not at all sure during the periods spoken

of. It will be a long time before aerial telegraphy can be carried on between places which are but a short distance apart, if, indeed, it ever will. In such cases the wires will continue to be used, though in long distances, such as for telegraphing from one side of the ocean to another, the aerial telegraph will entirely take its place. Professor Loomis has now on foot a scheme for a series of experiments from a point on one of the highest peaks on the Alps in Switzerland, to a similarly situated place in the Rocky mountains on this side of the world. If this succeeds, of course his invention will rank in importance with that of the electric telegraph itself, and be even greater than that of the telephone. All of the money necessary to carry on the experiments has already been promised, and it will not be many years if it turns out a success, before ocean cables will be one of the lost arts, as, having played their part, will be laid aside. The cost of aerial telegraphy will not be over one cent where the other is one thousand dollars.—*Washington Correspondent, Hartford Times.*

An Atrocious Electrical Discovery.

When the phonograph, that marvellous instrument for bottling speeches and preserving them for any length of time without injuring their tone, was invented, the public began to grow uneasy. What, with the telegraph, the telephone and the phonograph, it seemed as if electricians had lost all self-restraint, and there was a general feeling that this habit of constantly inventing improved methods of electrical communication was being carried altogether too far. Now, as will be seen above, we have still another invention, which is more startling than any of its predecessors. Prof. Loomis, of Washington, claims that he has discovered a method of telegraphing through the air without the aid of telegraph wires, telegraph poles, or small boys clad in uniform. This invention is fraught with enormous danger to the public, and should at once be sternly frowned down.

The new invention is based upon the alleged fact that there is a constant current of electricity in the atmosphere at a comparatively low height. Prof. Loomis erects a perpendicular iron rod on the top of a hill, which rod reaches the aerial electrical current. He also erects a similar rod on the top of another hill, and connects with each of them a battery and a telegraphic instrument. Then he sends a message up one of the rods into the aerial current. The current takes it up and carries it to the other rod, down which it descends, and is received by the operator. It will be seen that all that is needed in this system of telegraphy is a pair of perpendicular rods, a pair of moderately high hills, two telegraphic instruments, and two operators. Prof. Loomis has already telegraphed in this way over a distance of fifteen miles, and confidently expects to be able to send messages from the top of Trinity steeple, in this city, to the top of St. Paul's, in London, without the use of any connecting wires. The first objection to this nefarious invention is the fact that messages sent by the aerial current will come down any and every wire that happens to penetrate the current. No man will be able to send a message exclusively to any other man. If a man, about to visit Coney Island with a friend, telegraphs to his wife that he will be detained down town by business until a late hour, the message will reach every town in the United States, and fill the minds of his business correspondents with the conviction that he has fallen into dissolute ways, and will soon become an eminently respectable citizen and a defaulter. By the old fashioned method of telegraphing, messages could be made to steer any desired course. Under Prof. Loomis' system, however, they will be launched into air, without the possibility of regulating their course.

What is the precise height above the surface of the earth of the aerial electrical current we are not told, but there is good reason to believe that nearly all the lightning-rods erected on buildings of two stories or more in height, are in communication with it. Hitherto these rods have been looked upon as a protection from the danger of being struck by lightning, but if Prof. Loomis is permitted to carry his invention into operation, they will become a terrible source of danger. The aerial electrical current will be constantly full of Congressional speeches and other ponderous matter, which will be liable at any moment to descend our lightning-rods and penetrate our houses. A man may be quietly sitting in his study, dreaming of no danger, when suddenly he may be struck and prostrated by a Presidential oration on the beauty of conciliation. A mother, sitting

in the nursery with her baby in her arms, may be struck by a violent speech by Wendell Phillips, and sustain fatal injuries. An eloquent clergyman, while preaching in his pulpit, may be struck by one of Mr. Cox's Congressional jokes, and be made a gibbering idiot for the rest of his life. If a man takes passage on a steamer, flying messages will continually descend the lightning-rod, and the deck will be dented with German six-syllable words, or littered with the froth of *Herald* dispatches describing extraordinary weddings; while, if he climbs Mount Washington, he will find himself exposed to a hail of messages from the four quarters of the globe. Since the usual current is sure to ascend or descend in accordance with the state of the barometer, it may be argued that the Weather Bureau can warn us when there is an area of political telegrams in the lake region, or when an area of Congressional speeches threatens the New England States. Instead, however, of affording us any security, their warnings would only tend to create panics. It needs little imagination to foresee the alarm which would be caused by the announcement that "a speech by Senator Matthews is rapidly forming in the region of Washington, and will reach the Atlantic States early in the morning."

In view of the inevitable results of the new invention, Prof. Loomis should instantly abandon it. If he will do this peaceably, he may hope to be forgiven. If he remains obstinate he should be dealt with as a reckless, unprincipled and dangerous inventor.

The New York Wire Club.

Quoth I, "Here's Christmas come again,
And I no farther richer."
Time answered, "Ah! the old, old strain—
I prithee pass the pitcher."
* * * * *
Yet I must own I should not mind
To be a little richer.
"Labor and wait, and you may find—"
"Halloo! an empty pitcher!"

Jerry Borst taking the chair, called the attention of the members to the safe arrival of our friend Gerritt Smith from London. Nine centuries ago, continued the chairman, the British metropolis was a village and America a dream. I admit, however, that that was before my time. (Applause.) Denz ny Harmon said that the remains of an illustrious Smith were covered by a gray gravestone in a London church yard. He referred to Capt. John Smith, "sometimes Governor of Virginia and Admiral of New England." The greatest of all the John Smiths; his epitaph is, "Here lies one conquer'd that hath conquer'd kings!" (Applause.) Mr. J. E. Stark said that owing to the solemnity of the occasion he would not ask what Capt. Smith signed! Mechanical Engineer Bob Morris, intimated that but for the unaccountable disappearance of his arithmetic, he would have this evening propounded a problem for solution. Charlie Parr suggested that the loss was more probably owing to the physical propinquity of a human agent than the contiguity of inanimate elements. (Applause.) Mr. E. F. Welsh feared that from the effects of the members' jokes he might soon be sleeping in the valley. Gisborn Ward sang "The Old Sexton," in an impressive manner. The proverbial pin could have been heard to drop, when the chair arose to pronounce his valedictory. He said, "Telegraphers, it would be manifestly inappropriate for me to again call you together during the year 1877. It is a truism that speaking much is a sign of vanity, therefore, while heartily wishing you all a very merry Christmas, I declare this meeting adjourned without day, and in the words of Tiny Tim, "God bless us every one."

"LIGHTNING FLASHES AND ELECTRIC DASHES," compiled and published by W. J. Johnston, New York, is an interesting collection of anecdotes and adventures peculiar to telegraphic experience. Few occupations are so well calculated to furnish material for mirth as telegraphing. It offers such wide scope for the exercise of personal peculiarities on the part of those who invoke its aid, and its extensive range, including all sorts of people, incidents of a peculiar and amusing character are of frequent occurrence, the nature of which is well set forth in this entertaining volume. The book is written in a bright and sparkling style, and the numerous illustrations lend an additional interest to the work, which we have no doubt will meet with an extended sale.—*N. Y. Graphic.*

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

December 15th, 1877.

We wish it particularly understood that we will change addresses as often as desired. When requesting a change, always give the former as well as the present address.

INCREASED net profits and another dividend, but not a word about a re-instatement of operators' salaries.

We shall probably issue another sixteen page paper next issue, and publish the portrait of Mr. F. W. Jones, of Chicago, which has been ready for some time.

A LARGE number of subscriptions expire with this and next issue. Please bear in mind that the paper is always stopped at the expiration of the time paid for, and send in your renewals promptly, so as to avoid the annoyance of incomplete files.

In the face of a dividend on the part of the Western Union and a stock dividend by the A. and P., both the telegraph stocks have further declined since our last issue. Western Union is now quoted at 77½ asked, and A. and P. at 22 asked.

THE Atlantic and Pacific Telegraph Company own about \$600,000 of the Stock of the Franklin Telegraph Company, and, in order to distribute it, will pay a dividend of four and a half per cent., payable in that stock at par, to their stockholders on and after January 3.

So far, the vote in the case of "Sparks," or "Themes for the Thoughtful," seems to be in favor of a return to the Themes. We presume that if a change is to be made, it should occur at the beginning of the year—next issue. Unless, therefore, a decided objection be made in the meantime, we shall, in the number for January 1, 1878, resume the "Themes for the Thoughtful."

Good news for those about to renew their subscriptions. We have decided to send THE OPERATOR one year—or from November 1st, 1877 to January 1st, 1879—and a copy of "Lightning Flashes," to the same or separate addresses, on receipt of only \$2.50. THE OPERATOR one year and "Oakum Pickings," paper, \$1.75. "Lightning Flashes" and "Oakum Pickings," \$2.00. Paper, as above, and both books, only \$3.00.

So many questions have been addressed to us, asking how much a telephone costs and the like, that for the benefit of others who may be desirous of obtaining information on the subject, we will say that telephones are not sold, but rented. A set consisting of two at each end, costs \$50 a year. Of course, if the line has to be put up, that costs extra. Any desiring to lease a set can address The Telephone Company, 32 Tribune Building, New York.

A Brief Visit to Boston.

The editor of THE OPERATOR paid a flying visit to the above cultured city last week, and, of course, paid his respects to the operating room of the Western Union Main Office. The operating room, as usual, is at the top of the building, but is well lighted, though the business has lately increased to so great an extent as to render more room necessary, and a change is to be made, whereby the space allotted to the operating room will be about double what it now is. Not many changes take place in the operating force in Boston. Most of the men have been there for from fifteen to twenty-five years, have married and "settled down," as it is called. Three of the operators in the ladies' department are wives of operators working in the male operating room. The present force consists of: G. F. Milliken, manager; C. W. Henderson, chief operator; Frank Stevens, assistant chief operator; J. W. Duxbury, Inspector City Line.

DAY FORCE.—Thomas A. Davin, James Randall, E. A. Beardslee, G. W. Dennett, D. D. Devreux, E. B. Holder, C. G. Pond, J. C. Barritt, J. B. Phillips, C. B. Noyes, J. H. Shorin, P. P. Allen, W. A. Hennessey, Jr., D. B. Grandy, E. J. O'Connor, C. D. Stanford, J. A. Dougher, P. J. McMahon, O. L. Barron, J. F. Shorey, W. E. Tice, J. H. W. Hoogs, A. B. Churchill, W. E. Kettles, J. B. Gatins, C. L. Pope, F. A. Bradford, G. D. Colegrove, C. J. Sullivan; Jos. Walton, J. H. Humphrey, J. H. Milliken, J. F. Murray, J. E. Griffiths, J. T. Stevens, T. F. Bishop, George N. Thomas, William McFarland, M. J. Shea, J. J. C. Wilson, J. A. Elms, J. A. McGee, Charles Sawyer, B. G. Winter, M. W. Brown, T. J. Callahan, W. E. Perkins, J. H. Clark, George H. Crockett, H. E. Wyman, George Wheelock, D. C. Freeman, J. F. Dowsley, C. J. Brown, M. I. Holland, R. J. Tobin.

NIGHT FORCE.—Edwin F. Leighton, night manager; H. J. Pettingill, chief operator. Harry Williamson, E. G. Read, S. W. Eldridge, E. B. Pillsbury, E. E. Morrison, C. H. Sawyer, Thomas Kelly, J. B. Colson, J. C. Robinson, F. W. Glidden.

LADIES' DEPARTMENT.—Miss H. A. Partridge, manager; Mrs. N. E. Cobb, assistant manager. Mrs. C. S. Gruber, Mrs. S. B. Howard, Mrs. L. W. Beardslee, Miss A. F. West, Miss E. M. Kite, Miss H. F. McKinnon, Miss E. Merriam, Miss E. F. Vialle, Miss M. A. Nash, Miss L. F. Wilbur, Miss H. H. Chase.

Walking along Washington Street, a young man was pointed out to us whose history is rather interesting. His name is J. J. Hallahan, and he graduated from the Chelsea, Mass., office, about two years ago. He was appointed operator at the Hotel Clarendon, in Boston, and in a few weeks rented a room in the hotel, and advertised a telegraph college in connection with the Western Union Telegraph Company, guaranteeing employment and high salaries to his prospective students. This coming to the ears of Manager Milliken, the ambitious Hallahan was dismissed. He then opened another "college" on Boylston Street. This flourished but a short time, however, when he again removed, this time to Washington Street, near State. Here he opened what he called the New England Telegraph Line, advertising, in numerous circulars and otherwise, to send messages of ten words to any part of New England, "by the new opposition line," for fifteen cents. This

brought him some business, for most people like to encourage opposition lines, especially when they can save a dime by so doing. But, unfortunately, the New England Telegraph Line was not yet in working order—hadn't in fact, been commenced—so Mr. Hallahan found some difficulty in sending the messages "by the new opposition line." Pending the building of the line, therefore, that genius took the messages received from a confiding but economical public, to the offices of the Western Union and Atlantic and Pacific Telegraph Companies, and forwarded them, "collect at the other end." The above companies, however, not considering Mr. Hallahan a responsible party, refused to send the messages collect, and the New England Telegraph Line was forced out of competition. What Mr. Hallahan's next dodge will be nobody knows. It seems strange that the law does not interfere in the matter. Several of the operators in Boston did invoke its aid, getting the students to bring suits for obtaining money under false pretenses, but upon swearing that he had no money, which no doubt everybody believed, Hallahan was discharged. It is such men as this that drag the telegraph profession down, and all reputable operators should take a personal interest in exposing their villainy, and driving them from the business.

We walked over a considerable portion of Boston, viewed it from the top of both the City Hall and Bunker Hill Monument, and quite enjoyed the visit generally. Mr. J. F. Shorey, Boston agent of THE OPERATOR acted as guide on the occasion, and has our best thanks for the faithful and very satisfactory manner in which he discharged that duty.

Western Union Quarterly Meeting.

The regular meeting of the directors of the Western Union Telegraph Company was held in this city Dec. 12. The net profits for the quarter ending September 30, 1877, were \$775,931.74, which is some \$16,000 less than the estimate made at last quarterly meeting, but \$109,350.28 in excess of the net profit of the previous quarter. The net profits for the current quarter, ending December 31 inst., based upon official returns for October, nearly complete returns for November, and estimating the business for December, will be about \$750,138.75. In view of these facts it was resolved to declare a quarterly dividend of one and a half per cent. payable January 15.

The directors were informed that Mr. Orton, who is at present in California, has leased about two thousand miles of wire on the line of the Central Pacific road, and about three thousand miles more in California, south of San Francisco. This gives the company sole control of all the wires connecting the Pacific with the Atlantic west of Salt Lake City.

THE President's message which was delivered to Congress December 3, was the longest of any in sixteen years. It contained close upon 13,000 words, and was sent from Washington to New York, over ten wires in forty-four minutes, being received by the following gentlemen: Thomas G. Kennedy, J. B. Sabine, D. B. Mitchell, W. H. Ingles, R. Sprague, Fred Baldwin, C. H. Patch, J. W. Moreland, A. E. Sims, F. W. Cushing. The message was copied on manifold paper, each operator taking eight copies.

Home Again.

Messrs. Gerritt Smith and George A. Hamilton, electricians of the Western Union Telegraph Company, who successfully introduced the quadruplex system of telegraphy into Europe, returned home in the Cunard steamer China, on Dec. 6th. They were met at the Narrows by a delegation of New York telegraphers, and taken aboard the steamer William Orton, amid loud cheers and the blowing of the steam whistle of the Orton, answered by the Cunarder. After justice had been done to the viands provided, speeches were made by Ralph W. Pope, of the Gold and Stock Company, Henry Van Hovenbergh of the A. and P., and H. W. Pope, Superintendent of the American District. Gerritt spoke very kindly of the hospitalities of the British telegraphers, and Mr. Hamilton alluded in flattering terms to the beauty and accomplishments of the English ladies. The affair was under the supervision of Mr. G. B. Prescott, Jr., Mr. Stinson, of the electrician's office, acting as master of ceremonies. The operating department of the main office was represented by Manager Downer and operators Miller, Allen and Catlin. Mr. William Orton, Jr., son of the Western Union President, was among the guests. Everything passed off pleasantly.

John Oakum's Lecture.

Mr. Walter P. Phillips made his debut as a lecturer in Jersey City on Tuesday evening last before a highly intelligent audience, and was a pronounced success. The *Evening Journal* says, "he had the undivided attention of his audience from first to last, and sent his hearers home in a delighted frame of mind, and with some new ideas about 'Love after Marriage.'" The *New York Tribune* sums the lecture up briefly but thoroughly in the following sentence; "He gave a vivid picture of the two types of homes, rendered happy or wretched by the love or indifference of the husband and father, and dwelt on the simple, homely virtues that give to married life a perennial freshness and charm."

Mr. Phillips will repeat his lecture in Philadelphia on Friday evening next, and will probably speak in New York and Brooklyn, as well as elsewhere, during the winter.

WE would draw attention to the three new books advertised in this issue. "The Telephone," by Prof. Dolbear, is a neat little book of 128 pages, printed on tinted paper, and bound in cloth. The price is only 75 cents, and, besides several cuts, it gives all that any one desires to know in reference to that wonderful invention, the telephone—Reiss's, Gray's, Bell's, and other systems, as well as that invented by the author himself. There is also a chapter on how to make a telephone, in which telegraphers will be much interested. "The Life of Professor Samuel F. B. Morse," by Dr. Prime, is a handsome 788 page volume, of which every telegrapher's library should contain a copy. If an operator can read the book through, and not receive five dollars' worth of benefit, we will send him the book for nothing. "Munson's Complete Phonographer" is considered by most people to be the best and most easily learned system of shorthand now before the public. The book we offer contains 241 pages, and is the latest revised edition just published.

Premiums for Clubs for "The Operator."

For 2 Yearly Subscriptions, One Pack of Visiting Cards and Engraving of Prof. Morse.	
" 3 "	Copy of "Oakum Pickings."
" 5 "	Copy of THE OPERATOR, 1 year.
" 6 "	One No. 6 Exercising Tube.
" 7 "	Copy of "Lightning Flashies."
" 9 "	"Lightning Flashies" & "Pickings."
" 12 "	OPERATOR, "Flashies" & "Pickings."
" 15 "	An A Sounder or Learner's Outfit.
" 18 "	Goodyear Health Lift Complete.
" 24 "	Health Lift and copy of "Flashies."
" 30 "	A Splendid Nickel-Plated Relay.

JULIAN SOULE, who, it will be remembered, while acting as manager of the Atlantic and Pacific Telegraph Office in Philadelphia, advertised himself as head of the telegraph department of a "college" in the same city, and who in consequence was treated to a "free advertisement" in THE OPERATOR, has become a defaulter. Last month he absconded with funds of the Atlantic and Pacific Company, and was arrested in this city on Monday last. M. D. Crain, late chief operator at Kansas City, who received similar attention at the hands of THE OPERATOR, has been driven out of the business, and another reigns in his stead. These cases should serve to deter others from engaging in the disreputable business of keeping operators' salaries down by flooding the market with incompetent labor.

A TELEGRAM dated San Francisco, December 12, says that, President Orton, of the Western Union Telegraph Company, has concluded a lease of the telegraph lines owned and operated by the Central Pacific Railroad Company, west of Salt Lake and throughout California for a term of five years and thereafter until one year's notice by either party shall have been given for its termination. The dispatch facetiously adds that this consolidates and harmonizes all the telegraph interests on the Pacific coast.

THE PRESIDENT'S MESSAGE IN PHILADELPHIA.

—The President's message, containing 13,000 words, was received from Washington on ten wires in 45 minutes. After being received it was sent from Philadelphia to Harrisburgh and Pittsburgh on five wires in 90 minutes, and to Lancaster on three wires in two hours and fifty minutes, the latter by Schussler, Atkinson, and Doc Bradley. There was also a very long synopsis sent to Wilkesbarre and afternoon papers throughout the eastern part of the state.

We have received a copy of Mr. Pennock's Christmas Song "Jennie is Waiting for Me," advertised on first page. There seems to be quite an amount of musical talent in the profession, and this latest song by Mr. Pennock, a well known operator in the cable office in Duxbury, shows that we are not at all deteriorating in that respect.

"Spark and Cinders" is a neat little book of 103 pages, printed on tinted paper. The poems are of interest to both telegraphers and railroad men, Mr. Aulls, the author, being himself a railroad operator at South Bend, Ind.

THE OPERATOR is always stopped at the expiration of the year, or of the time for which it is paid; so that if you wish to continue it, it would be well to renew your subscription at least one week before the time expires.

Sparks.

The young lady who inquired at the box office for a "preserved seat," probably desired to avoid the jam.

"Life is made up of sunshine and shadow"—says Josh Bilings, "about five shadows to one sunshine."

Congress is to adjourn on the 7th of December "Pardon our ignorance," remarks the statesman of the *St. Louis Journal*, "but what horse race is to occur on the 8th?"

The cold world little realizes the sense of desolation that shuts down on a man who thinks he has been handed too much change by his grocer when he dodges around the corner and finds it right to a cent.

The Burlington *Hawk-Eye* says that a man, however innocent he may be, is always enveloped in a thick cloud of damaging circumstantial evidence, when he leans up against the hotel corner, carefully picks out a wooden toothpick and tries to light it on the top of a glass cigar case.

"Women graduates," says a Philadelphia paper, "are knocking at the doors of the Massachusetts Medical Society." Out in this country, adds the Burlington *Hawk-Eye*, it is the poor husband who has to get up and dust at midnight's holy hour and pound bedlam out of the doctor's door with a brick, after he has pulled the bell knob out by the roots.

A party of vegetarians who were boarding at a water cure establishment, while taking a walk in the fields, were attacked by a bull, which chased them furiously out of his pasture. "That's your gratitude, is it, you great hateful thing?" exclaimed one of the ladies, panting with fright and fatigue, "After this I'll eat beef three times a day!"

When a young man from Harvard is asked if he will always love her thus, he does not answer. "Will a duck swim?" Science has taken the place of poetry, and he replies: "Will evolution from the unconditioned working in protoplasm by accretion and absorption produce the organic cell?" Then he inquires languidly if there are any cold beans about the house.

"Mr. Editor," said he, producing a voluminous manuscript, "I've got a few remarks here on the silver remonetization question, which I'd like you to publish. I commence by showing that money is a circulating medium, as it were, and after proving that the ancient Jews had shekels of silver, and dealing with the commercial system of the ancient Phoenicians and Egyptians, we take in the classic ages of Greece and Rome, when the great sages and philosophers—" —! —!! —!!! —!!! —!!!

He had staid till the clock hands hung together at eleven, and that valuable recorder of time was menacing a strike. She had yawned until her mouth felt large enough for a horse-collar, and yet the young man evinced no symptoms of taking his departure. "I've been working on a motto to-day," she finally said, as she held her eyes open with her fingers, "don't you want to see it?" He said he did. She brought out the article and handed it to him for inspection. He held it up to the light, and read the cheerful sentence: "There's no place like home." The young man guessed he'd be going.

SENTIMENT UTILIZED.—A man with a new hand-organ was grinding out tunes on Miami Avenue yesterday forenoon, when a young lady beckoned him to the gate and asked:

"Do you think you can find No.—Woodward avenue?"

He nodded his head.

"Well, you walk down there, and I'll follow on. When you see me enter the store you start off with some sad tune, like 'Growing Old.'"

He nodded.

"You see my father owns the store, and he's hard up. I want six dollars to use this afternoon, and if we can sadden his heart a little he'll come down."

He nodded.

"Now, then keep your eyes open, and when you see me sail in do you brace your feet, strike up the saddest tune in your box, and grind as if your life depended upon it. I'll give you fifty cents whether pap comes down or not, but he'll hand over the minute we can make him think of the past and gone. Do you understand?"

He grinned and nodded, and made a bee line for the store, and in a few minutes the strains of "The Old Folks at Home" were heard, above the roar of traffic.

Supt. Sellers' Funeral.

The funeral of Calvin T. Sellers, the deceased superintendent of the Philadelphia and Reading Railroad and Commercial Telegraph Lines, whose death was announced in the last issue of THE OPERATOR, took place at Reading on the 28th ult. The deceased learned telegraphing in Altoona, Penn., in 1860, under Wm. C. McCormick and Miles R. Jones. The latter was present at the funeral. In 1865 Mr. Sellers accepted a position with the Atlantic and Ohio Company in Philadelphia, but a few months afterward, being then only 22 years of age, was appointed to the important position which he filled so well until his premature death. He was beloved by all with whom he came in contact, and more especially by those under his supervision, a fact to which the elaborate and costly offerings at his funeral bore ample testimony. Through the kindness of J. E. Wooten, Gen'l Manager, a special car was furnished to convey to and from Reading all who wished to attend the funeral. The Western Union Company was represented by Supt. James Merrihew, J. D. Clarke and J. D. Maize, the latter an old office associate many years ago of the deceased, both at Philadelphia and Altoona. Manager O. W. Stager, represented the P. & R. Commercial Line, while F. W. Griffin, represented the Atlantic and Pacific Company. There were also present 75 operators from the Reading Company's Lines, in all parts of the State, and many members of the Masonic fraternity. The remains were dressed in plain black broadcloth. The head rested upon a satin pillow and was slightly inclined upon the right side, having the appearance of peaceful slumber and undisturbed rest. While a marked falling away was perceptible, the familiar features of the lamented young Superintendent were natural and life-like. Upon the casket lid was a silver plate bearing the inscription, "Calvin Theobald Sellers, born July 2d, 1843, died November 24th, 1877." The floral display was the grandest ever seen in Reading, and comprised amongst many other designs, the following, contributed mostly by the Telegraph fraternity. At the head was a magnificent floral design; upon a bed of flowers were erected miniature telegraph poles, with a broken wire dangling its ends among the lilies and tuberoses. Above this was a very appropriate design in white flowers, representing a switch and the key of a telegraph instrument; a large sized oval standing cross, and a beautiful pillow of white flowers containing the inscription "at peace;" a large column of white flowers nearly three feet high, with a pillow base; a very large white floral globe on a floral pedestal, three feet high; a magnificent pillow and cross-shaped standing columns in a glass case, nearly three feet high; at the foot of the coffin was a beautiful white floral cross and crown; lying near the crossed hands of the corpse was a beautiful floral lyre, with one of the strings represented as broken. The funeral procession was a mile and a half in length, and the obsequies, taken altogether, were a just tribute to one of the kindest hearted of men and one of the brightest lights of our profession. His successor has not yet been named. It is thought, however, that Mr. H. W. Sprange, Assistant Superintendent, will receive the appointment.

Deaf Mutes as Telegraph Operators.

Mr. J. C. Davis, of 302 West Thirtieth Street, advertised yesterday for 100 deaf mutes to be made into telegraph operators. Nine years ago, he says, he taught a deaf mute named Hoffman telegraphy, Hoffman learned the art in less than three months, and became one of the most expert operators in the country, being at the time of his death the chief operator in the Mobile telegraph office. Mr. Davis has since taught twenty deaf and dumb persons, and says that they are almost invariably much quicker to learn than persons who speak and hear, and make far better operators. "I had a call from one to-day," he said, "who told me that he had been a book-binder. He was at first very skeptical, but I convinced him of the ease with which he could learn by giving him one lesson. In three quarters of an hour he knew more than half of the Morse alphabet, and by referring occasionally to the alphabet written out for a guide he could talk with me on the instrument with ease. Of twenty that I taught in Philadelphia, sixteen are now in London, where a number of them are in the telegraph department of the general post-office. Two of them have positions in Philadelphia, and one in Montgomery or Mobile, I don't know which. It

is marvelous that deaf mutes should be able to use their sight as they do. There was one of my pupils with whom I could talk with my eyes. They are wonderfully quick and accurate. While they are receiving dispatches, which, of course, they do either by sight or touch, they are not disturbed by sounds or conversation, and are consequently less liable to make mistakes than a sound operator. I begin with this little instrument—a sounder—and teach them to hold the hand over the key in receiving, so that they may learn by the touch first. Of course there is one requisite to a first-class operator that I do not teach. He must be a rapid penman. After going through a course of three months' tuition he must spend a week or two in an office to learn the peculiarities of the manner of doing business in that office. Then if he is a rapid writer he is a good operator. I am teaching, of course, as a matter of business."—*New York World.*

Referring to the above, which was copied by the Springfield Republican, Mr. H. M. Pepper, in a letter to the editor of the latter paper, says: "The article appears extremely ludicrous to those experienced in the art of telegraphy, in view of the fact that the sense of hearing is the chief requisite in a proficient telegrapher. The era of sight-reading by means of characters recorded on paper is a thing of the past in the practical operations of the telegraph, its use being confined chiefly to small offices where little business is transacted. No operator is now considered competent to fill a responsible position unless able to 'read by sound.' We notice some very peculiar statements in the article referred to. We were always under the impression that a 'key' was used in 'transmitting' messages; here it seems to be the 'receiving medium.' The instructor (Mr. Davis) says: 'I begin with this little instrument—a sounder—and teach them to hold the hand over the key in receiving, so they may learn by the touch first.' This statement shows conclusively that he understands nothing whatever of the subject in hand; to receive a message in this manner is an utter impossibility. The idea of messages being received by 'sight' or 'touch' with the instruments known as 'sounders' is simply absurd. If one could even read by observing the movements of the lever, it would be impossible to record or copy the message at the same time. This objection also applies to receiving by 'touch.' We should like to be enlightened in regard to the manner of distinguishing 'office calls' by these deaf mutes. They cannot hear them, they are not to be seen, and we fail to see in what manner they are to be felt. The problem remains unsolved. The assertion that deaf and dumb persons make 'far better operators than persons who speak or hear' is a gross exaggeration. The gentleman further informs us that after three months' tuition, a week or two spent in an office to learn the 'peculiarities' of the business enables a man to become a good operator. This is new to most of us with ten or more years' experience in the 'peculiarities' of the business. We were of the opinion it required about three years of earnest study and practical effort to bring about this result; we even think we know of cases where, after six or seven years' experience, the persons could scarcely be styled 'good operators.' In short, it is quite evident the statement is a transparent fraud. The golden age may eventually arrive when a man deaf, dumb and blind may attain proficiency in telegraphy. Till then, however, we insist on maintaining that a large quantity and choice quality of brain are essentials in our profession."

Submarine Cables.

Particulars of the submarine cables now in existence have been stated as follows, by the Director of the Bureau International at Berne, Switzerland. Private companies—Number of cables, 149; miles of cable, 59,547; miles of wire, 5,725. Totals, 569; 63,989; 71,262. The last total shows the extent of active wire as distinguished from the mileage of cable, some of them bearing as many as seven conductors. These figures give an average length of 112 miles for each cable, the average of the governments being under 11, and that of the private corporations close upon 400 miles. The enumeration includes all wires laid in bays, gulfs, or estuaries on the coasts of the various countries, but excludes any laid across interior lakes or water-courses. In the north of Europe, the government system of Norway embraces no fewer than 198 cables, each carrying one wire and only making up an aggregate of 238 nautical miles in length. In Sweden, besides the joint possession with Germany and Denmark of submarine cables joining the Scan-

dinavian Peninsula with the European systems, the Government has four cables, of an aggregate length of 22½ nautical miles. Denmark has in its system twenty-nine different cables, with a total length of 101 nautical miles. Holland possesses in all eighteen submarine cables, with an aggregate of 36 nautical miles, the longest being 16 miles. Although Russia possesses a telegraph second only in point of extent in Europe to that of the United Kingdom, the geographical formation of that vast empire is such that it only possesses three submarine cables, of 62 miles in all, besides its one-half share in the Crimea and Caucasus line. The cables of Germany in the North Sea and Baltic, and of Austria, in the Adriatic, are forty-six in number, and 235½ nautical miles in extent. Italy has twelve cables in all, one of them being 118 miles long. Spain has six, extending to 283 miles. The twenty-six cables of France are mostly short, though one of them—that from Marseilles to Algeria, 500 miles—is one of the longest in any national system. Great Britain, with Ireland, has forty-nine cables, with a total length of 500½ nautical miles, in addition to being owner of three cables to the Continent from the Norfolk coast, embracing 400 miles additional. Portugal is the only European nation which possesses no Government submarine telegraph. The construction of most of the private lines has been due to British capital and enterprise. The Anglo-American Company has the longest submarine cable in the world (Brest to St. Pierre, 2585½ nautical miles), and a group of five Atlantic cables in all; yet the total length of its cables is exceeded by the system of the Eastern Telegraph Company. The seventeen cables of the former extend in all to 12,315 nautical miles, the longest of the subsidiary lines used to join those from Europe at the insular shore ends on this side, being that from St. Pierre to Duxbury, Massachusetts, with a length of 749 miles. The Eastern Company has, including the Eastern extension, a total of 21,883 nautical miles, being about one-third of the whole existing in the world. The original enterprise presented a total of thirty-nine cables and 14,502½ nautical miles, and the extension nine cables and 7,381 miles. Next in point of extent are the systems of the West Indian and the Brazilian Companies, the former having nineteen cables with a total of 3,970 miles and the latter three cables and 3,866 miles. If the landings at Madeira and Cape Verde Islands are left out of view, the line from Portugal to Brazil may be looked on as the longest cables in the world. These two systems—the West Indian and the Brazilian—are united by the limits of the Western and Brazilian Companies with nine cables of a total length of 3,750 nautical miles. Next to the French-Atlantic cable the longest unbroken line of submarine wire is the cable of the Direct United States Company, from Ballingskellig's Bay, County Kerry, Ireland, to Tor Bay, in Nova Scotia, which is 2,429 nautical miles in length.

Some Very Sensible Remarks about Telegraphers.

Many of our profession seem to labor under the impression that we have more cause to complain of our condition, than any class of people who toil for their daily bread. Admitting that we are, as a general thing, rather low down in the financial scale, and that very few of us receive the best of compensation for our services, let us see whether all the fault is entirely on one side.

Take for example one who performs the duties of a railway agent, express agent, operator and messenger at some country town. His time is pretty well occupied, but he will in all probability have an hour or so during the twenty-four at his disposal. Now in what manner is this hour spent? Is it devoted to acquiring some useful information that will better enable him to fill some higher position, or is it spent in perfecting himself as a pool, billiard, or poker player, wasting his time and spending his money for something that will be of no material benefit to him? Who but himself is making his condition worse instead of better?

Again, we have one of the profession who announces himself as a "Professor of Telegraphy," and entices a dozen or more innocents into his clutches for the purpose of learning "telegraphin" at fifty dollars per head. (One young man out west has "slid the scale" down to the moderate sum of four dollars per month.) He will give his pupils to understand that all of them will in a short time be "fast men," command high wages and light work. Is this man laboring to build up the profession?

Another class are those who have a desire to reach

the pinnacle of their profession without labor or exertion on their part. They expect to go by a few straddles and jumps to positions filled by men who have toiled faithfully to reach them, and, failing, they chew the bitter cud of discontent, and imagine themselves abused.

There is still another class of men who may be trying to better themselves, but they forget that little things go to make up large ones, and by neglecting the little things they fail to procure the big ones. They are "diving after the unfathomable and soaring after the infinite," overlooking the plain, tangible reality immediately within their grasp.

The last and most injurious are those who are totally void of any desire to do themselves or anybody else any good. A kind of "dam-fo-care" race of beings who live for they know not what, and care less. It is a notable fact that one of this class never reads *THE OPERATOR*.

Let us, when we are reflecting upon our condition, remember that we can not better it without first making an effort to improve ourselves. It would be nonsense to expect a builder to erect a handsome durable edifice by using half burned brick, friable stone, or untempered mortar. Equally so it is nonsense to expect that our calling can be made more pleasant and remunerative while we continue to be extravagant with our time and money, void of true ambition and principle, or supremely indifferent.

ALPHA.

A Noble Girl and Careful Operator.

At the Sligo Junction on the low grade division A. V. R. R., the telegraph office is in charge of Miss Ella Campbell, who is unusually attentive in fulfilling her highly responsible position, as the following will show:

One evening last month, as she was awaiting the arrival of an eastern bound train, a long freight, numbering fifty-five heavily laden cars, bound westward, slackened up at the station, which the conductor entered, registered, shouted "all right" to his engineer and was about to get on his train, when Miss C., remembering something, caught from the subtle click of her instrument, rushed out and bade him stop his train, which was slowly moving away. He replied that they had the right of way. "No," said the lady, "I heard an order passing over the wire, telling you to remain here until the arrival of the Sligo passenger train, which you will certainly meet, because it is somewhere between this and the next station westward. This order should have been given you at Troy" (a station just passed by the freight). The conductor was persuaded to enter the office by the young operator, who going to the key, asking the superintendent at Brookville if such an order had been sent to Troy. "Yes," was the reply. The careless operator at Troy had failed to deliver this important order, but Miss C.'s carefully trained ear had caught it, and the result was the hasty switching of that long freight from the main track to the side, and just as this was done a shrill whistle announced the coming of the Sligo train, the headlight of which threw a glare along the track.

Thankful were the twenty passengers, conductor, engineer, and brakemen that their lives were in the hands of one who fully realized the fact. "For," said Engineer Arms of the freight, "I could not have stopped my heavy train in less than a mile. Our escape would have been impossible." Then extending his great hardened hand, simply said, "Miss Campbell, I don't know what to say," and retired to his engine with feelings of deep gratitude to his young friend who had prevented an inevitable collision, the result of which would be horrible to contemplate. Conductor Bostwick and Engineer Ayres, of the passenger train, feelingly caught Miss C.'s hand, seriously thanking her for preventing an accident which would have certainly cost them their lives. The Superintendent at Brookville telegraphed his thanks, and in a few days sent a letter of commendation, inclosing a bank check with the thanks of the officers of the A. V. R. R., as a mark of their appreciation of her care and attention to business. Miss Campbell is in every way deserving of the high praise received for performing her trust in such a commendable manner. —*Parker City (Pa.) Daily*.

The aid of the telephone is being secured in Jersey City in connection with the courts. A telegraph wire is being laid from the Hudson County Court House to the telegraph office in Montgomery Street, and a telephone will be attached to each end whereby lawyers can communicate with each other rapidly between their offices and the court house.

Echoes from 197.

Theodore Williams has resigned.

Bif Cook is all-night man in Salt Lake City.

Mr. C. F. Benett has essayed the 12 to 9 trick.

Frank Morrison, the delegate from Baltimore, was one of the finest speakers at the Insurance meeting.

A white vest made its appearance in the office last week, the ladies wrung their hands, and strong men felt for their seven shooters.

The wintry blast has driven Jules Guthridge from the mountains, and he beams upon his co-laborers from his accustomed place at 197.

A woman recently called to send a message. She asked the receiver to write it for her. He inquired if she could not write it herself, and she replied that she could not because she was an entire stranger in the city.

Supt. Weller, of the Law Telegraph Co., having severely criticized the conduct of Mr. Lambdin, the latter, with infinite scorn and in his deepest tones, remarked: "Let him blow; let him blow out; he can't harm me."

Getting excused for half an hour in the afternoon is getting to be a much-abused practice. Oscar Kraft recently applied for the privilege, and the chief distinctly remembered a similar application from him three years ago.

The ladies complain that one of the men is so fond of fresh air as to insist upon the opening of windows on both sides of the operating room. Several of the dear creatures assert that had it not been Ben-ett was mild weather, they believe they would have caught their death of cold from the draught.

Dashes Here and There.

The very, very latest application of the telephone is to deep sea soundings. In reference to the mystery of the sea the telephone intends to get to the bottom of it.

The ladies are all down on the telephone. They don't like to have a fellow whispering in their ear with his mouth like Sheridan at Winchester, twenty miles away. —*Philadelphia Bulletin*.

Theology has had to revise itself a little, and in order to keep pace with the times and conciliate Colonel Ingersoll, the Christian world is now prepared to admit that instead of a trump, Gabriel will use a telephone.

A cable dispatch dated London, Dec. 5th, says that the Telegraph Construction and Maintenance Company's steamer Hibernia, was wrecked in Manhattan Bay on the 22d ult. The crew were saved. The Hibernia had on board cable to repair the Para and Pernambuco section of the Brazilian cable.

Andrew Johnson, it is said, preserved all his papers, and died leaving them in the upper story of a shop in Greenville. Throughout his life he carefully saved all papers, and even took to Greenville complete files of three daily newspapers of New York covering his presidential term. Of telegrams alone he must have left more than a bushel in a compact form. He saved them all; none were considered of so little importance as not to be worth saving. He remarked once how little space a folded letter took up, and what small trouble to save them, and how important they sometimes became.

INTERNATIONAL OCEAN TELEGRAPH COMPANY. —The annual meeting of the International Ocean Telegraph Company was held Dec. 4th, in the Western Union Building, this city. In the absence of the President, Vice-President Dr. Norvin Green, occupied the chair. About three-fourths of the stock was represented. According to the Treasurer's report the net receipts for the year were \$254,000, and the funded debt, maturing in 1878 and 1879, \$330,000. A quarterly dividend of 2 per cent. recently declared by the Board of Directors will leave in the treasury January 1, 1878, \$100,400. It is estimated that this surplus and the earnings over and above the amount required to pay interest on the debt and quarterly dividends will be sufficient to meet the funded liabilities when due.

The Board has authorized the adoption of the word rate of tolls, charging per word the decimal of its former rate for ten words regardless of the number of words sent. The old board of directors, consisting of Wm. Orton, Norvin Green, E. S. Sanford, Cambridge Livingston, Cyrus Field, Augustus Schell, Harrison Durkee, James Scrymser, and R. H. Rochester, was re-elected.

Pittsburg Items.

A short time since Rignold played a star engagement in this city, producing Henry V. A young lady attending one of the female colleges, desiring to see the performance, telegraphed her [Pa] in the West asking if she "might see Henry V. to-night." The old gentleman, in the simplicity of his heart, not wishing to deprive his daughter of the company of a nice young man, immediately sent a message to the president of the college, requesting that his daughter "be permitted to receive a call from Henry V. to-night. Whether she received the royal visitor we did not learn. Paul Bossart, late of Oil City, passed through on his way to New Orleans a few days since. Mr. Al. Dunn of Parkers, Pa., is in town en route to Cleveland, where he will spend the holidays. In the W. U. office, Mr. E. W. Furmu has been appointed to a regular position on the night force, relieving Mr. A. G. Haight, formerly of Philadelphia, who goes on the sub list. Mr. Theo. E. Moreland, ("Dode") has been appointed assistant to night chief McElroy. Mr. H. M. Goewey, of Western and Southern fame, has returned to his home and is now subbing in the W. U. office, as is also Mr. Harry D. Nichols. Major Geo. M. Eitel-miller is permanently located in Pittsburg. He devotes his energies at nights in rushing Mr. Johnny Walker at Cincinnati. Eity took the President's message in unusually fine style for Pittsburg, and received very flattering notices from the press. Tommy Egan has returned home, after an extended Southern tour. Jimmy Fisher spent Thanksgiving week eating turkey with his father-in-law in northern Ohio. Mr. Firmin is attending the funeral of his father near Toledo. Kate, sister of Willie Connelly, of the W. U. office, died December 7th, after a long and painful illness. The boys desire to express their sympathy in both cases. The A. and P. wires and men were transferred to the Western Union office Tuesday last, and on Wednesday the men received orders from Mr. Bates to return to their old quarters, which they immediately did. The wires being re-transferred, things assumed their old-time look. The new switchboard for the W. U. office has arrived from New York, and will be put in place next week. It is 12 feet long, and contains space for 130 wires, with all the "modern improvements." The operators, including chiefs of the day and night forces respectively, have presented Supt. Rowe with their photographs elegantly mounted and framed. The pictures hang in his private office, and are very highly prized by Mr. Rowe, between whom and the men there exists a warm personal regard.

The Electro-Mercurial Fire Alarm.

In your edition of Dec. 1st I notice an article headed "A wonderful Electrical Machine" for the prevention of fires, introduced in the St. George Hotel, Philadelphia. As this apparatus was furnished by the Western Electric Manufacturing Co., I thought a fuller description would be of interest to your readers:

The apparatus is what is known as our Electro-Mercurial Fire Alarm. This system, as perfected by us, is very simple in its design and operation. It consists of mercurial bulbs, or thermostats, placed in the ceiling throughout a building, averaging about twenty feet apart. These thermostats are connected by wire with an electric annunciator and bell in the office of the building. When the atmosphere around any thermostat reaches 120° the mercury contained in the bulb expands, closing the circuit, which rings the bell and operates the annunciator, locating the fire in the building.

The thermostat consists of a glass bulb filled with mercury, and placed in a metallic shield for protection. The bulb has two upright tubes, in each of which is a platinum wire. In the shorter tube, which is closed, the platinum wire connects with the mercury at all times. In the other, the wire is set above the mercury at that degree of temperature at which the alarm is intended to be given (unless otherwise desired, we set them at 120°).

We are now introducing this apparatus in the main building of the Western Union Telegraph Company in New York city, also the shops of the same company. It has been the means of saving several valuable buildings in Chicago and elsewhere.

In Chicago nearly every large building is connected through this system with the Fire Patrol office, and are thus protected day and night. In one or two instances the alarm was given and the patrol were on hand and extinguished the fire before the occupants of the building were aware of its existence.

D. H. LOUDERBACK, Agent,
605 Chestnut Street, Philadelphia

PERSONALS.

Mr. L. D. Stanley is the night chief operator at Kansas City, Mo.

Mr. W. G. Barrows, is the efficient and wide-awake manager of Danforth, Illinois, W. U. office.

C. Frank Meek and A. A. G. McCabe will please forward their address to C. M. Clark, Tucson, Arizona.

Charles A. Tinker, general superintendent Atlantic and Pacific, accompanied President Orton and party to the Pacific coast.

Tom Egan, recently with A. and P. in Chicago, is at present in Pittsburgh, waiting for something to turn up. Tom is an A No. 1 operator.

Holmes Parvin, lineman, stationed at Mifflin, Pa., was instantly killed on Monday, Dec. 3, by a hog's head of insulators rolling upon him, crushing his head.

McLoraine, who was announced in the last issue as being one of the victims of reduction of force in the Atlantic and Pacific office, has been retained, and James T. Shain goes in his stead.

John E. Payne of the auditing department of the Philadelphia office, was married in November, but kept the matter very quiet for over a month. Didn't he get it when it was found out, though!

Mr. A. H. Bauer, late agent for THE OPERATOR at Baltimore, finds that his other duties prevent his giving the requisite attention to the paper. Mr. C. J. Barclay, of the same office will, therefore, in future represent us in that city.

A handsome silver tea set was last week presented by the members of the telegraph department, second and third divisions, P. C. and St. L. R. R., to Mr. W. G. Sala, the train dispatcher of the division, accompanied by the usual pleasant speeches.

Press Operator McGarr, of the Western Union Telegraph Office in this city, attached a telephone to the wires this morning, and distinctly heard press operator Lige Taylor, of Syracuse, sing. When Lige was operator in Utica, he was a terrific singer. Distance always lends enchantment to such a voice.—*Utica Herald*

BOSTON NOTES.—Mr. E. J. Perkins resigned his position as night operator in general Post Office on the 1st. Mr. H. E. Wyman of "Dh" office, transferred to fill vacancy caused by Mr. Perkins' resignation. Mr. W. J. Parritt, manager of "Po" office, has resigned, and left for his home in Eastport, Maine. Mr. J. H. Clark appointed manager "Po" office vice Mr. Parritt resigned. Mr. Charles H. Sawyer, late manager of A & P office, 31 State Street, has accepted a position with the Western Union. Mr. D. B. Grandy leaves for his home on the 15th inst. to spend Christmas. Mr. W. A. Hennessey, Jr., also takes a vacation of one month. Mr. W. L. Waugh, of Toronto, Ont., "subbing" for him. Mr. Chas. S. McCoy, now working for the W. U. in Burlington, Vt., returns here on the 15th inst., to sub for Mr. Grandy two weeks. Mr. F. A. Bradford is off for the holidays, Mr. Green, of Lawrence, Mass., performing Mr. Bradford's duties. Miss West makes the prettiest copy that comes from the ladies' dept. Miss Nash works 54 West, (Worcester and Way).

Referring to an item in last issue stating that a Mr. Swayze, "formerly manager, W. U. office, Pittsboro, Pa., and at present operator for the same company at Hillsdale, Mich.," had taken charge of a plug factory in the latter place, Mr. Wm. Kline, Jr., Superintendent Telegraph L. S. and M. S. R'y, Toledo, O., writes: Please allow me to say that at Hillsdale, Mich., the Western Union Company's office is at the L. S. and M. S. R'y depot, and Mr. B. F. Ford is now and has been the manager of the office for the past ten years. Students upon our lines are forbidden. In justice to Mr. Ford, I make this statement. I do not know Charles R. Swayze.

Charles Arnold, manager, Atlantic and Pacific, Joliet, Illinois, is, to use his own words, "the best comic singer outside of the Penitentiary." He is "a fellow of infinite jest," and has a decided weakness for practical jokes. His latest achievement in this line is taking "students" into his office, and after they have mastered the alphabet sufficiently to make eight dots for a P, and laboriously request the sender to "frite stof" set them down to work a wire, and the unfortunate operators wrestling with them into a frenzy of impotent wrath. This Charley

considers a rich joke, and fiendishly chuckles to himself as he pictures in his mind's eye the agonized, despairing countenance of "the fellow at 't'other end," struggling through a literal waste of dots and dashes, meanwhile earnestly and vigorously misquoting Scripture to fill in the spaces.

MILWAUKEE.—Professor C. H. Haskins delivered a very interesting and instructive lecture on the telephone, Saturday evening, Dec. 1, before the members of the Common Council, in accordance with a special invitation from that body. He explained the working of that wonderful invention to the satisfaction of all present, and left such an impression upon his hearers, that I venture to say each of them dreamed of the telephone that night. As a lecturer our esteemed superintendent has become quite popular, and as an electrician he has few equals. Barron and Relyea, proprietors of the Cream City Telegraph College, have left for parts unknown, carrying with them the honest earnings of a few ambitious ladies and gentlemen, who were taken into their confidence. It is really a shame that our police authorities do not capture such rascals. Were a few of them punished, it would perhaps help to divest the country of a horde of those vagabonds who at present infest it. The N. W. Telegraph Company, on Dec. 1, inaugurated a general half-rate system on all its lines. The public will be greatly benefited by this change, as heretofore no half-rate business was done by said company.

MARRIAGES.

JORDAN—BUNTING.—Nov. 28, at the residence of Mr. C. H. Smith, Madison, Fla., by the Rev. E. B. Carroll, Mr. William S. Jordan, Manager Western Union Telegraph Company, to Miss Blanche Bunting.

BIRTHS.

Dec. 3, to George W. Fowler, Esq., General Manager's Office, C. S. R'y, St. Thomas, Ont., a daughter. Second edition.

DEATHS.

ALWORTH.—Dec. 1, at Belle Plaine, Iowa, of typhoid fever, after an illness of only five days, Henry W. Alworth, train dispatcher, C. & N. W. R. R., aged twenty-four years.

At a telegraphic meeting of his associates between Chicago and Council Bluffs, a committee was appointed, consisting of E. J. Walsh, Boone, Frank Mordoff, Belle Plaine, J. Day Mills and Tracy Barnes, Clinton, who framed suitable resolutions, which were telegraphed to all offices, and unanimously adopted by each of deceased's confreres on the division. Copies were also forwarded to the local papers, the *Journal*, and THE OPERATOR.

SYLVESTER.—Dec. 10, at Catskill, N. Y., John R. Sylvester, aged forty-eight years, and ten months.

Mr. Sylvester was an old timer, and manager of Catskill, N. Y., office, for nearly twenty-seven years. He was one of the few who had faith in electricity at the time it was first introduced, and thirty-two years ago dissolved his connection with the Catskill *Recorder and Democrat*, of which he was part owner, and invested his funds with what he could obtain from his friends in telegraph stock. Other villages also furnishing money, the first west shore wire was run from New York to Albany, and he took charge of the Catskill office, which he retained until about six years ago, when failing health and the increase of business compelled the Western Union Telegraph Company to place another manager in charge, and he retired to private life. When the telegraph office was first opened people were so incredulous that Mr. Sylvester often had to make a bargain with his customers that if they sent a message and did not get what they telegraphed for, he would not charge them for sending it. Mr. Sylvester and his friends lost all they had invested in the telegraph company, as the line, not paying, was sold, and bought in by the U. S. Telegraph Company, and by them sold to the W. U. Telegraph Company, by whom it is now considered one of the best wires they have. Mr. Sylvester leaves a wife and three children, who have the sympathy of a large circle of friends.

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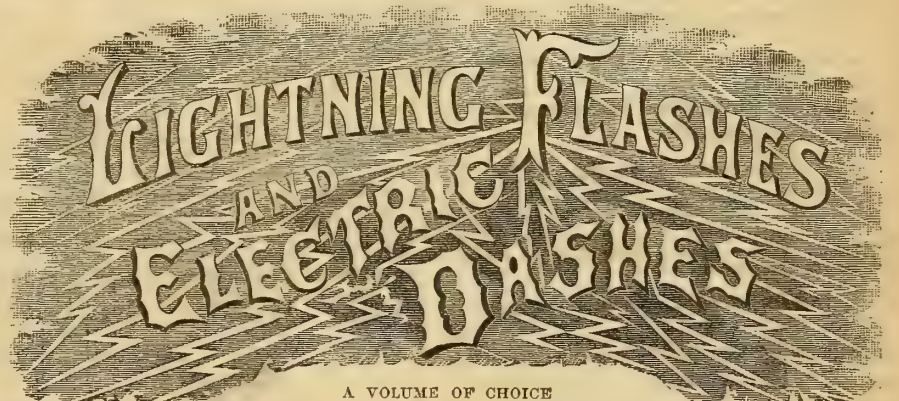
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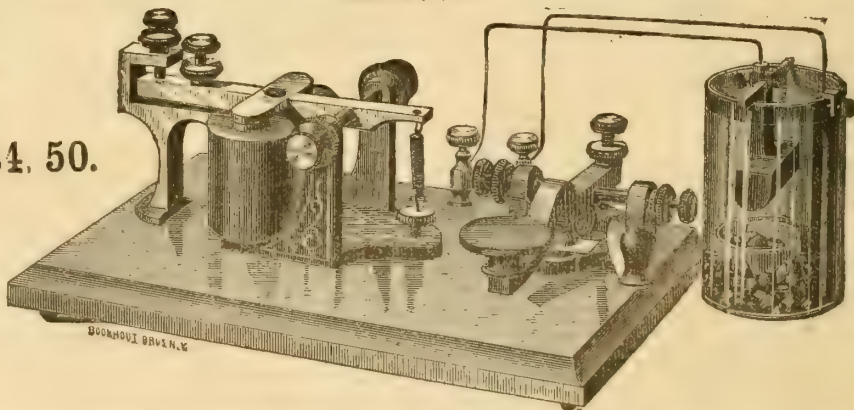
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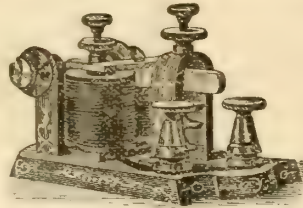
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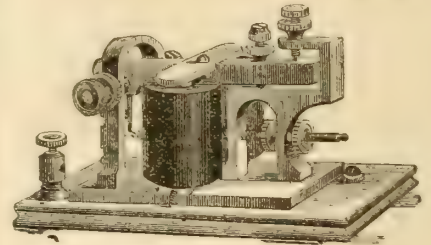
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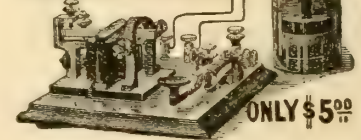
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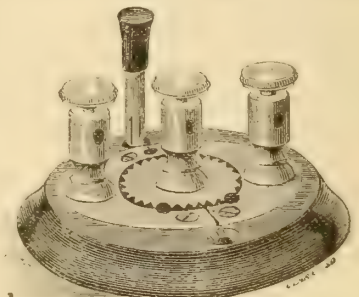
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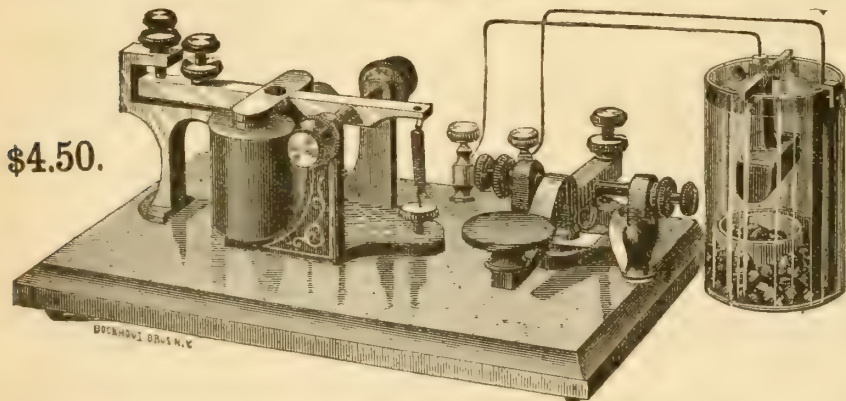
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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

January 15th, 1878.

Volume IX.

Whole No. 94.

"Old Man Finn."

I met an old man—prematurely old—
Perhaps past manhood's prime;
But his haggard face a tell-tale told,
How low in filth and slime
His soul had sunk. His feet were almost bare;
His clothes were scant and thin;
His coat, which showed many an ungly tare,
Was fastened with a pin:
I asked his name—he said people called him
Old Man Finn.

Down his wan and furrowed cheeks
Ran a flood of scalding tears,
As he told the story of his life—
Lost hopes, and misspent years;
A once happy home, a loving wife;
But why that tale re-tell;
A broken home, a broken heart,
And gifted talents destroyed—debased—
By the Demon King of Hell.

One night, when the frozen ground
Was covered thick with snow,
An old man was found lying cold and stiff
In Drunken Alley Row;
He was laid in the Potter's Field
Beside his humble kin,
And on a slab at his head was cut,
Old Man Finn!

Some Pithy Remarks from Helen on the Subject of Woman's Love.

January 1st, issue of THE OPERATOR received. I'm sure I feel highly honored by the nice editorial notice, and sincerely grateful for the kind wishes expressed, as well as flattered at the interest so many readers have manifested in my reminiscences, published some months ago. I would have written to thank them sooner, had not so much sickness in the family put everything else out of my head.

Attention is directed editorially in the same number of THE OPERATOR to an implied remark by Mr. Anthony Trollope, to the effect that the ladies in the Central Telegraph Office in London are inclined to regard their business merely as a stepping-stone to a husband; and the opinion of lady readers is asked as to whether the same atrocious custom prevails in this country.

Now, for my part, I don't see anything so very dreadful about that. I think that if the English girls do look at the matter in that light, they only show their good sense. Who, pray, would work for seventy-five cents a day, and live "just as if she were a young man," when she could get a dear, good, devoted husband to love and cherish her, and provide the wherewithal for household expenses and "pin money?"

I don't believe that any of them would be willing to marry a man she did not love, but if a girl found one with whom she thought she could live happily, is she to blame for sacrificing seventy-five cents a day in the hope of securing a good husband?

Some male writers seem to think it their particular duty to make fun of women, especially on the subject of matrimony, and their aversion to a particular female usually results in invectives against the whole sex. If we are to believe these astute observers of human nature, the toilet is woman's great scene of business, and the right adjustment of her hair the chief employment of her life; she talks, moves, and smiles with a design upon the male portion of creation; every feature of her face, every part of her dress, is filled with allurements to entrap the unwary; her sole object in life is to attract legions of moths around the flame of her beauty; she has an unaccountable penchant for everything that is showy and superficial; her days and nights are filled up with dress, diversion, and flattery; her ideas are caught from the current prattle of the hour, and she is indebted for all her happiness to compliments and praise.

And, yet, if women deserve censure for endeavoring to show off their charms to the best advantage, methinks that men themselves are to blame for it. When, for instance, did ever female goodness or intelligence command that admiration and respect, or inspire that ardor which man is ever ready to accord to a beautiful and fascinating face, or a graceful and commanding figure? I fear that few will be able to answer this conundrum! As Johnson says: How then are you going to persuade the ladies that the time spent at the toilet is lost in vanity, when every moment they have some new conviction that their interest is more effectually promoted by a ribbon well disposed than by the brightest act of heroic virtue?

I wish men understood woman's nature better than they do. A man falls in love with a beautiful young girl. There is nothing that he thinks will add to her enjoyment but he is ready to do, no matter at what personal sacrifice; and he is never happy but in planning some pleasant little surprise for the dear girl, that will bring a flush of joy to the cheek he loves so well, or a bright sparkle of delight to the eye that speaks to him so eloquently. He draws a chair close to her side, and whispers in her willing ear that the bowers of paradise do not afford so delightful a spot as that hallowed by her presence.

It is one of the characteristics of woman to be most in love with him whom she imagines to be most in love with her, and so these two young people come to regard each other's society as absolutely essential to happiness, and think that, deprived of this, the world to them would be but a bleak wilderness. Time passes on, and they are married. Her love for him knows no diminution, but he—well, the change from careful respect to the most unbounded familiarity makes him less particular than formerly as to her tastes and wishes, and he does not evince that willingness to do her lightest bidding by which he won her love. She feels that she is being slighted by the man who vowed to love her until death, and every little instance of coldness or neglect is magnified until in her imagination she believes herself to be abused by and deceived in the man whom of all the world she thought she could trust. If she speaks to him on the subject, he gently snubs her, not that he means it for unkindness, but because he thinks she needs a little discipline, and should take a more practical, common-sense view of life, and also because he does not think that she requires so much love and kindness, and so many little attentions, as before they were married. Then she begins to realize that it is the old, old story of courting in poetry, and after marriage living in prose; and life loses its golden hue, and the amusements and pleasures she once loved grow dull and insipid.

During the honeymoon he never thought of leaving the house in the morning without kissing her good-bye, and she could feel the tingle of that kiss all through the day, and until evening, when he returned, his countenance beaming with love and pleasure, caught her rapturously in his arms, and again pressed his lips passionately to her's. Now he considers that sort of thing childish, comes home with a cloud on his brow, and complains of the little worries that have annoyed him during the day. Then he used to compliment her when the pie or cake pleased him, and she redoubled her efforts to make it even better next time; now, he takes it as a matter of course, and says nothing. He doesn't compare views with her on any subject, seldom asks her advice, and rarely consults her wishes if they do not coincide with his own. She is not treated as a dear friend and life-long companion, but as one who is to be tolerated because she is useful in preparing his meals, and looking after the house.

By-and-bye he begins to wonder why she is not so gay and entertaining as she used to be, or how it is that he does not enjoy her society as he did. But after awhile, when the doctor comes, and says that his wife has consumption—that's what the world calls it—and cannot live, he recalls the numerous instances in which he might have made her happy, and in doing everything in his power for her comfort now, tries to make amends for years of neglect. And when death comes, and he looks into the coffin and sees those white hands stilled forever that years ago he used to think it so much of a privilege to hold in his own, or press to his lips, he is overcome with grief and mortification, and wishes that there were any possible way of living his married life over again. Oh! how different a life it would be! In the meantime, the neighbors seeing his sorrow, pity him, and say, "how he must have loved her!"

I need hardly say that such conduct is very foolish, short-sighted, and wrong, and I hope that readers of THE OPERATOR who are married, or may marry, will see to it that they do not make shipwreck of their own lives, and that of their companion, by falling into the same unfortunately too common error. A man, in the first place, should exercise extreme care in the choice of a wife—not marry a woman he does not devotedly love, and, being married, should endeavor to keep up the same delightful love-making and attentions that he practiced during their courtship. He thought it a very heaven upon earth to be in her company then; it seemed to give him higher, purer, nobler aims and aspirations; he thought better of the whole sex for her sake, and the idea of some one else stepping between them, winning her love and marrying her, he could not bear to even think of. Why not keep that up through life? You will find that she will improve upon acquaintance; that you will discover new beauties the more you study her, and that the more you love her the happier you will yourself be, and the more zealously will she try to do everything she can to please you.

Never allow yourself to get into the habit of treating her coldly, or of disregarding her tastes and wishes, and above all be especially careful to guard against ever having a quarrel. Some will tell you that reconciliations after disagreements have a peculiarly fascinating tendency. Don't believe them. The first quarrel which goes as far as harsh, contemptuous language, though it may be duly "made up," will do much toward shattering that perfect confidence and trust which each had for the other; will make the use of the same kind of language much more easy afterward, and leave behind it a feeling that there is less to love in each other than before. Addison gives an excellent piece of advice on this subject when he says: Before marriage we cannot be too inquisitive and discerning in the faults of the person beloved, nor after it too dim-sighted and superficial. However perfect and accomplished the person appears to be to you at a distance, you will find upon a more intimate acquaintance many blemishes and imperfections which you never discovered or perhaps suspected. Here, therefore, discretion and good nature are to show their strength; the first will hinder your thoughts from dwelling on what is disagreeable, the other will raise in you all the tenderness of compassion and humanity, and by degrees soften those very imperfections into beauties.

My! I have managed to make a pretty long article of this, haven't I? My physician absolutely forbids me to talk until I get stronger; but I'm determined, you see, that I shall be heard in some way! Speak of angels, and we see their wings! There goes the bell. I suppose it's the doctor. If he happens to see what I've been doing, I've no doubt the discovery will be followed by a highly interesting lecture to the present writer, even yours sincerely,
HELEN.

Making A Heroine.

BY MISS L. A. CHURCHILL.

CHAPTER VII.

"When are you coming? The flowers have come,
Bees in the balmy air happily hum,
In the dim woods where the cool mosses are
Gleams the Anemone's bright little star.
Tenderly, timidly, down in the dell
Sighs the sweet violet, drops the hare bell;
Soft in the wavy grass lightens the dew;—
Spring keeps her promises—why do not you?"
Mrs. Osgood.

I have said that my Lena was different from most girls, and I still hold to the statement. After Ralph Percival left town, instead of growing sentimental, and keeping a diary in which she could write all her thoughts and feelings, she became irritable and morose. Operators on the line to whom she had been especially kind in times past, would wonderingly inquire, after some impatient word from her, "Is it C.?" And even Berty, whom she would have served at the cost of almost personal discomfort to herself, was often unmercifully snubbed over the wire. This state of things went on for a month. Then one November day, when she was feeling particularly disconsolate, a letter from the up train, which had just passed, was handed her. Opening it, she read:

"V. S. OFFICE, Wednesday, P. M.
DEAR LENA:—I wonder what can be the matter with you lately. Or is it only my fancy that makes you different from my dear girlie of a few weeks

ago? I have wanted so much to see you, for I have been lonely these cheerless days; but you have seemed so cold, so often impatient, and—forgive me, dear, if this sounds harsh—really unkind, that my heart has ached in thinking I might be losing my friend. I have been too proud to ask about this before, as I have often longed to do, but now I do ask earnestly what has caused this change in your manner, or if the change be only imaginary. Please answer very soon, and oblige your own BERTY."

Tears gathered in Lena's eyes as she read, and when the letter was finished, her head went down on the desk before her, and she sobbed like a very child. The weeping did her good, and when it was finished, more impatient words than had ever been spoken to any person on the line were addressed to herself.

"Lena Chester," she said, severely, "you are the girl who wished to make yourself a heroine by becoming a good and true woman. Thus far you are a dead failure, and I'm disgusted with you. What right have you to make others unhappy because you yourself suffer? Dear Bert! I am not worthy of your regard, but I will assure you by word and deed that you are not losing your friend, and that your friend can be more true and tender than she has ever been before."

That evening Bert sat again in Lena's office, with Lena's hand playing over her forehead in the old, familiar way, while Lena's voice told her of her (Lena's) love-dream, and how she had been awakened from it. And, with the darkness hiding her glowing cheeks, for Lena had not lighted her lamp, she gave confidence for confidence, and the two found comfort in confiding in each other. Bert had decided to spend the night with her friend, so their conversation was long, and it was late ere they left the office to seek their room at the latter's boarding place.

When the warm color which had mantled Bert's cheeks as she talked of Arthur Ainslie faded out, Lena noticed with a stifled sigh how pale and thin they were growing. "She is confined too steadily, and thinks too much of one who does not care for her," was her thought, and then and there she resolved, if it were possible, to interest the absent Arthur in the blue-eyed girl who would make him so fitting a companion in life. She did not speak her thoughts, however, but there was an added tenderness in her manner as she tucked the bedclothes around the shapely shoulders, and whispered, "Good night, sweet friend."

The winter months slipped rapidly away, and as they glided by, Lena Chester felt that she was becoming more like her ideal heroine; that she was learning to "subdue her faults," and to say with her heart, "Not my will, but Thine." Not an amateur operator on the line but daily blessed her, while the experienced ones often wondered at her patience and forbearance. She did not forget Ralph Percival, but she realized that much of the feeling she had mistaken for love was merely fascination, and not the abiding affection that stands, without changing, the test of time and absence; for when she read the letter, sent her one April morning, telling her of his marriage, she knew that she was glad that Gerrie Morton had become his bride instead of herself.

But a new trouble had come into her life. Bert Pearson's health had been fading steadily and surely during the months of cold weather. She still retained her office, however, knowing how little able her family was to support her in idleness, whispering bravely, "I shall surely be better in the spring." What a dear, fond, noble friend Lena was in those days! The flowers Bert loved, the books which would cheer her, the wines which would strengthen her, all found their way to her office, purchased with a part of Lena's not over liberal salary. Her letters were like a tonic to the grateful sick girl, and she often left her office with a spare operator, that she might spend a few hours with her. Again and again did her lips whiten, as they asked: "What shall I do if my darling dies?"

Arthur Ainslie's letters had been long and frequent during his absence, and every one of them brought untold comfort to Lena. He wrote sometimes to Bert, always expressing deep regret that she was not well, and the hope that she might soon entirely recover. Lena wrote him constantly of her friend, always speaking of her in the highest terms of praise.

He had succeeded far beyond his expectations in his work. Rough men, who never attended a lecture in their lives before he came, listened attentively, while the fair faced, slightly formed young

man talked to them with so much heart in his voice, and hundreds signed the pledge, and commenced new lives.

He had been away nine months when his letters announced that he was coming home for a visit, and Bert's wan face lighted up so wonderfully at the news, that Lena dared to hope that his coming might do much toward restoring the health of her precious girl. But the spring passed, and the long, hot, summer time came on apace, and still work kept him in the west. Lena expressed a desire that he should make all possible haste in getting home, but she could not tell him her reason for this desire, and he still lingered till the summer was quite gone. Bert was then unable to go to her office, and many along the line sadly realized that she probably would never be able to go again.

CHAPTER VIII.

"She was dead. No sleep so beautiful and calm, so free from trace of pain, so fair to look upon."

DICKENS.

"But I'll love him more, more,
Than e'er wife loved before,
Be the days dark or bright."

JEAN INGELOW.

"She has attended to her business with too much regularity. Her boot soles have been too thin, her exercise insufficient, and consumption is the result," the gruff old doctor who attended Bert said. "And she has had too much time to think," added Lena, mentally, for it was to her that the statement was made.

When Bert became confined to her room and bed, she, Lena, gave up her office for a time, and stayed constantly in the sick room.

"I would like to see Arthur before I die," Bert said, one day, and forthwith a message was sent to him, but, unfortunately, he had that day left the place from which his last letter had been dated, and no one knew of his whereabouts, and the receiving reported back to the sending office, "Can not deliver your message to Ainslie. Party not to be found."

How Lena suffered during those days, when she watched beside her friend, knowing how soon she must lose her! But she strove to be cheerful, and her presence was something for which Bert could not be thankful enough. How hard it was for her now, with her great tender heart, so large a part of which was given to this dear friend, to bow her head and say, "Not my will, but Thine." But that lesson, and many another, the fruits of which were known in after times, was learned in those sad hours, never to be forgotten.

One September day, with but few parting words, for she was half unconscious at the time, the young spirit left the fair body, now grown so thin and emaciated, and a neighbor who had been called in, said, as she closed the sweet blue eyes, "Bert is dead." There was a heavy groan from the father, who knelt by her bedside, a bitter cry of "Oh! my child, is it possible you are gone!" from the stricken mother who knelt by his side, convulsive sobbing from the children, her brothers and sisters, who hung around the bed, awed and half frightened by this unusual scene. But there was one mourner who stood apart from the others, with clasped hands, and a face as white as that resting so quietly on the pillow. Not even a sigh escaped her lips, but over and over again from her heart there arose the cry, "Bert, my Bert, how gladly would I have died for you!" And in that hour of grief Lena's thoughts turned to Arthur Ainslie, and she longed for his presence with a new intensity, feeling sure that if he were there he would comfort her.

Near the home whose cares she so willingly had lightened, whose burdens she had so bravely helped to bear, they made a grave, and in the early autumn time, when the leaves were beginning to fall, and a hazy, golden mist to fill the air, Bert, blue eyed, fair-haired Bert, was laid therein.

Oh, the loneliness that follows the laying away of a dear one to sleep till the resurrection morn. Surely the angels must look down in pity on those who are enduring this loneliness, and a kind Father remember his promise to be with his children all ways!

After the funeral Lena returned to her office, but it seemed so desolate that she wondered how she could endure to stay there. She missed her lost friend every hour, and sometimes wished that she too were lying in the grave, where no weariness or care can come. But she was submissive. Never a rebellious thought entered her mind toward Him who "giveth and taketh away," but she suffered, as only those with natures like her's—strong, deep, and tender—can suffer. One evening, when Bert had

been dead three weeks, Lena sat alone in her office, feeling that life was too barren of brightness, too full of gloom and shadows to be bearable, and in a heart breaking tone she said, aloud:

"Oh, I am so weary and lonely! Arthur, 'Arthur, will you never come?'"

"I am here, Lena. Am I welcome?"

His arms were about her, and her words, "I am glad, oh, so glad," answered him as he wished to be answered.

"I have been calling you half an hour," an operator in another office said to her later, but she heeded not his impatient words, for in that half hour Arthur had told her of the true, shielding, heart-warm affection he felt for her, and she had acknowledged that he had grown to be the man she most truly respected, most dearly loved. He told her, also, that he had written her three weeks before, informing her where he was, but he had afterward learned that the person by whom he sent his letter to the office forgot to mail it. He had not learned of Bert's death until just as he was starting for home, when he saw a notice of it in a paper he accidentally took up, and had travelled day and night since that time, such was his desire to be with one whom he knew would need him. He had changed in the time he had been absent. His figure was stouter, his face ruddier, his mouth firmer, his whole air more manly, but he still had the same sweet smile, the same tender manner as when he went away, and Lena felt that the rough places in life would be smoothed for her with a gentle if a strong hand. * * * * *

Lena had been Arthur Ainslie's wife three long, useful, happy years, when a little book, full of kind, helpful, encouraging words appeared. Many copies were sent gratuitously to people who needed them, and who blessed the author, whose name they did not know. Mr. and Mrs. Ainslie are doing a great and good work. Their hands are held out to the weak, their purse is open to the poor, their love and sympathy are ever ready for the neglected and sorrowful, and the mention of their names is enough to bring tears of gratitude to hundreds of eyes whose owners have been benefited by them.

Ralph Percival is prosperous and happy in the love of his wife and child, and no visitors are more welcome beneath his roof than the Ainslies, for he feels that he owes them much.

Has Lena not made herself the heroine she wished to be? She has asked to be nothing greater or grander than a good and true woman. That she has become, and is satisfied. She has learned the "useful lessons of life" wherever they have been open to her, and is both worthy and willing to become a teacher for others. And, now, with a hearty wish that there were more like her and her noble husband, we bid you good-bye.

[THE END.]

The Telegraph Girl.

A STORY OF THE ENGLISH POSTAL TELEGRAPHS.

BY ANTHONY TROLLOPE.

During this period Lucy of course had to go to the office alone, leaving Sophy to the care of the lodging-house keeper. And, in her solitude, troubles were heavy on her. In the first place Sophy's illness had created certain necessarily increased expenses, and at the same time their joint incomes had been diminished by twenty-five cents a week out of four dollars and a half. Lucy was in general matters allowed to be the dispenser of the money; but on occasions the other girl would assert her rights—which always meant her right to some indulgence out of their joint incomes which would be an indulgence to her and her alone. Even those bright ribbons could not be had for nothing. Lucy wanted no bright ribbons. When they were fairly prosperous she had not grudged some little expenditure in this direction. She had told herself that young girls like to be bright in the eyes of men, and that she had no right even to endeavor to make her friend look at all these things with her eyes. She even confessed to herself some deficiency on her own part, some want of womanliness in that she did not aspire to be attractive—still owing to herself, vehemently declaring to herself, that to be attractive in the eyes of a man whom she could love would of all delights be the most delightful. [Thinking of all this she had endeavored not to be angry with poor Sophy; but when she became pinched for money, and to feel doubtful whether at the end of each fortnight there would be enough to pay Mrs. Green for lodgings and coal, then her heart became sad within her, and she told herself that Sophy, though she was ill, ought to be more careful.

And there was another trouble, which for a while was very grievous. Telegraphy is an art not yet perfected among us, and is still subject to many changes. Now, it was the case at this time that the pundits of the office were in favor of the Bright's bell instead of the single needle, communicating messages by ear instead of by sight. The little dots and dashes, which even in Lucy's time had been changed more than once, had quickly become familiar to her. No one could read and use her telegraphic literature more rapidly or correctly than Lucy Graham. But now that this system of little tinkling sounds was coming up—a system which seemed to be very pleasant to those females who were gifted with musical aptitudes—she found herself to be less quick, less expert, less useful than her neighbors. This was very sad, for she had always been buoyed up by an unconscious conviction of her own superior intelligence. And then, though there had been neither promises or threats, she had become aware—at any rate had thought that she was aware—that those girls who could work the bells would rise more quickly to higher pay than the less gifted ones. She had struggled, therefore, to overcome the difficulty. She had endeavored to force her ears to do that which her ears were not capable of accomplishing. She had failed, and to-day had owned to herself that she must fail. But Sophy had been one of the first to catch the tinkling sounds. Lucy came back to her room sad and down at heart and full of troubles. She had a long task of needle-work before her, which had been put by for a while through causes consequent on Sophy's illness. "Now she is better, perhaps he will marry her and take her away, and I shall be alone again," she said to herself, as though declaring that such a state of things would be a relief to her, and almost a happiness.

"He has just been here," said Sophy to her as soon as she entered the room. Sophy was painfully, cruelly smart, clean and starched, and shining about her locks—so prepared that, as Lucy thought, she must have evidently expected him.

"Well, and what did he say?"

"He has not said much yet, but it was very good of him to come and see me—and he was looking so handsome! He is going out somewhere this evening, to some political meeting, with two or three other men, and he was got up quite like a gentleman. I do like to see him look like that."

"I always think a working man looks best in his working clothes," said Lucy. "There's some truth about him then. When he gets into a black coat he is pretending to be something else, but everybody can see the difference."

There was a severity, almost a savageness, in this which surprised Sophy so much that at first she hardly knew how to answer it. "He is going to speak at the meeting," she said, after a pause, "and, of course, he had to make himself tidy. He told me all he is going to say. Should you not like to hear him speak?"

"No," said Lucy very sharply, setting to work instantly upon her labors, not giving herself a moment for preparation or a moment for rest. Why should she like to hear a man speak who could descend to love so empty and so vain a thing as that? Then she became gradually ashamed of her own feelings. "Yes," she said; "I think I should like to hear him speak;—only if I were not quite so tired. Mr. Hall is a man of good sense and well educated, and I think I should like to hear him speak."

"I should like to hear him say one thing I know," said Sophy. Then Lucy in her rage tore asunder some fragment of a garment on which she was working.

Sophy went back to her work, and in a very few days was permanently moved from the seat which she had hitherto occupied next to Alec Murray and near to Lucy to a distant part of the room in which the bells were used. And, as a part of the arrangement consequent on this, she was called on to attend from ten to six instead of from noon till eight; and her hour for dining was changed also. In this way a great separation between the girls was made, for neither could they walk to the office together, nor walk from it. To Lucy, though she was sometimes inclined to be angry with her friend, this was very painful. But Sophy triumphed in it greatly. "I think we are to have a step up to \$5.25 in our part of the room," she said, laughing. "Won't it be nice to have even that much more money?" Lucy said solemnly that any increase of income was always nice, and that when such income was earned by superiority of acquirement it was a matter of just pride. This she enunciated with something of a dogmatic air; having schooled

herself to give all due praise to Sophy, although it had to be given at the expense of her own feelings. But when Sophy said in reply that that was just what she had been thinking herself, and that as she could do her work by ear she was of course worth more than those who could not, then the other could only with difficulty repress the soreness of her heart.

But to Sophy I think the new arrangements were most pleasant because it enabled her to reach the street in which she lived just when Abraham Hall was accustomed to return from his work. He would generally come home—to clean himself as she called it—and would then again go out for his employment or amusement for the evening; and now by a proper system of lying in wait, by creeping slow or walking quick, and by watching well, she was generally able to have a word or two with him. But he was so very bashful! He would always call her Miss Wilson; and she of course was obliged to call him Mr. Hall. "How is Miss Graham?" he asked, one evening.

"She is very well. I think Lucy is always well. I never knew anybody so strong as she is."

"It is a great blessing. And how are you yourself?"

"I do get so tired at that nasty office. Though of course I like what I am doing now better than the other. But I don't think I shall ever really be strong till I get away from the telegraphs. I suppose you have no young ladies working where you are?"

"There are I believe a lot of them in the building, stitching bindings, but I never see them."

"I don't think you care much for young ladies, Mr. Hall."

"Not much—now."

"Why not now? What does that mean?"

"I dare say I never told you or Miss Graham before. But I had a wife of my own for a time."

"A wife! You!"

"Yes indeed. But she did not stay with me long. She left me before we had been a year married."

"Left you!"

"She died," he said, correcting very quickly the false impression which his words had been calculated to make.

"Dear me! Died before a year was out. How sad!"

"It was very sad."

"And you had no—no—no baby, Mr. Hall?"

"I wish she had had none, because then she would have been still living. Yes, I have a boy. Poor little mortal! It is two years old I think to-day."

"I should so like to see him. A little boy! Do bring him some day, Mr. Hall." Then the father explained that the child was in the country, down in Hertfordshire; but nevertheless he promised that he would some day bring him up to town and show him to his new friends.

Surely having once been married, and having a child, he must want another wife! And yet how little apt he was to say or do any of those things by saying and doing which men are supposed to express their desire in that direction! He was very slow at making love;—so slow that Sophy hardly found herself able to make use of her own little experience with him. Alec Murray, who, however, in the way of a husband was not worth thinking of, had a great deal more to say for himself. She could put on her ribbons for Mr. Hall, and wait for him in the street, and look up into his face, and call him Mr. Hall—but she could not tell him how she would love that little boy and what an excellent mother she would be to him, unless he gave her some encouragement.

When Lucy heard that he had been a married man, and that he had a child, she was gratified, though she knew not why. "Yes, I should like to see him, of course," she said, speaking of the boy. "A child, if you have not the responsibility of taking care of it, is always nice."

"I should so like to take care of it."

"I should not like to ask him to bring the boy up out of the country." She paused a moment and then added, "He is just the man whom I should have thought would have married, and just the man to be made very serious by the grief of such a loss. I am coming to think it does a person good to have to bear troubles."

"You would not say that if you always felt as sick as I do after your day's work."

About a week after that Sophy was so weak in the middle of the day that she was obliged to leave the office and go home. "I know it will kill me," she said that evening, "if I go on with it. The place is so stuffy and nasty, and then those terrible stairs. If I could get out of it and settle down, then

I should be quite well. I am not made for that kind of work—not like you are."

"I think I was made for it, certainly."

"It is such a blessing to be strong," said poor Sophy.

"Yes; it is a blessing. And I do bless God that He has made me so. It is the one good thing that has been given to me, and it is better, I think, than all the others." As she said this she looked at Sophy and thought she was very pretty; but she thought also that prettiness had its dangers and its temptations, and that good strong serviceable health might perhaps be better for one who had to earn her bread.

But through all these thoughts, there was a great struggle going on within her. To be able to earn one's bread without personal suffering is very good. To be tempted by prettiness to ribbons, pomatum, and vanities which one cannot afford is very bad. To do as Sophy was doing in regard to this young man, setting her cap at him and resolving to make prey of him as a fowler does of a bird, was, to her way of thinking, most unseemly. But to be loved by such a man as Abraham Hall, to be chosen by him as his companion, to be removed from the hard, outside, unwomanly work of the world to the indoor occupations which a husband would require of her—how much better a life according to her real tastes would that be than anything which she now saw before her! It was all very well to be brown and strong while the exigencies of her position were those which now surrounded her; but she could not keep herself from dreaming of something which would have been much better than that.

A month or two passed away, during which the child had on one occasion been brought up to town on a Saturday evening, and had been petted and washed and fed and generally cared for by the two girls during the Sunday—all which greatly increased their intimacy with the father. And now, as Lucy quickly observed, Abraham Hall called Sophy by her Christian name. When the word was first pronounced in Lucy's presence Sophy blushed and looked around at her friend. But she never said that the change had been made at her own request. "I do so hate to be called Miss Wilson," she had said. "It seems among friends as though I were a hundred years old." Then he had called her Sophy. But she did not dare—not as yet—to call him Abraham. All which the other girl watched very closely, saying nothing.

But during these two months Sophy had been away from her office more than half the time. Then the doctor said she had better leave town for awhile. It was September, and it was desired that she should pass that month at Hastings. Now it should be explained that in such emergencies as this the department has provided a most kindly aid for young women. Some five or six at a time are sent out for a month to the watering place of Hastings or Brighton, and are employed in the telegraph offices of those towns for a few hours only each day. Their railway fares are paid for them, and a small extra allowance is made to them to enable them to live away from their homes. The privilege is too generally sought to be always at the command of her who wants it; nor is it accorded except on the doctor's certificate. But in the September Sophy Wilson was sent down to Hastings.

In spite, however, of the official benevolence which greatly lightened the special burden which illness must always bring on those who have to earn their bread, and which in Sophy Wilson's case had done so much for her, nevertheless the weight of the misfortune fell heavily on poor Lucy. Some little struggle had to be made as to clothes before the girl could be sent away from her home; and, though the sick one was enabled to support herself at Hastings, the cost of the London lodgings which should have been divided fell entirely upon Lucy. Then at the end of the month there came worse tidings. The doctor at Hastings declared that the girl was unfit to go back to her work—was indeed altogether unfit for each effort as eight hours' continued attendance required from her. She wanted at any rate some period of perfect rest, and therefore she remained down at the sea-side without the extra allowance which was so much needed for her maintenance.

Then the struggle became very severe with Lucy—so severe that she began to doubt whether she could long endure it. Sophy had her fifty cents a day, the two-thirds of her wages, but she could not subsist on that. Something had to be sent to her in addition, and this something could only come from Lucy's wages. So at least it was at first. In order to avoid debt she gave up her

{CONTINUED ON PAGE 8.}

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

January 15th, 1878.

ATLANTIC AND PACIFIC stock is quoted at 20 asked, and Western Union at 76 1/2.

WE can still send back numbers since November 1st free to new yearly subscribers.

It is to be regretted that Mr. Jones' portrait in last issue of THE OPERATOR was so poorly printed. It did not do the gentleman justice.

THE conclusion of Miss Churchill's interesting story of "Making a Heroine," will be found in this number. The young author has performed her task very creditably, and given us a story graceful in language, and very pretty in sentiment.

THOSE about to renew their subscriptions will save money by ordering one or both books in connection with the paper. THE OPERATOR one year and a copy of "Oakum Pickings," \$1.75. THE OPERATOR and "Lightning Flashes," cloth, \$2.50. The paper one year and both books only \$3.00.

HELEN says in an article on page 3, "I wish men understood woman's nature better than they do." Correct, Helen. So do we. We would give a life subscription to THE OPERATOR, with ourselves thrown in as a chromo, if we could only understand a certain young woman's nature enough to enable us to make a more favorable impression upon that obdurate heart of her's.

READERS OF THE OPERATOR should bear in mind that we are always happy to purchase for them anything that they may desire from New York, whether in the line of telegraphic or electrical goods or otherwise. Any telegraphic instrument or apparatus advertised in these columns, or manufactured in this country, will be sent on receipt of very lowest manufacturers' prices. Books, newspapers, or magazines on any subject published in New York, Boston, Philadelphia and Chicago, will be sent prepaid by mail on receipt of publisher's prices.

As Messrs. L. G. Tillotson & Co. announce in this issue a discount of 33 1-3 per cent. from catalogue prices on relays, sounders, keys, batteries, etc., the present would seem an excellent time to purchase any of these instruments that may be required. This firm, it is well-known, manufactures and keeps on hand in unlimited quantities anything and everything in the line of electrical and telegraphic goods, from a snapper sounder to a switch-board, and from a learner's outfit to the full equipments for a telegraph line of hundreds of miles in length. Their two-column advertisement will be found on the last page of this paper, to which we would draw the attention of the reader.

Samuel J. Hoffman, the Deaf Mute Telegrapher

So much is said in another part of this paper on the subject of deaf mutes as telegraph operators, and especially in reference to the case of Samuel J. Hoffman, that a few words in regard to Mr. Hoffman's life and connection with telegraphy will probably prove interesting to telegraphers generally, and at the same time conclusively show that Mr. "J. C. Davis" could have had nothing to do in regard to learning Hoffman telegraphy.

Hoffman, taking a fancy to telegraphy, learned the business in 1861, with Charles Nelson, in Liberty, Va. At that time he had not lost his hearing. About a year afterward, however, owing to sickness and a severe cold brought on by exposure, he became almost totally deaf, but never lost his speech. In 1863, being then an expert operator, he worked in Charleston, S. C. during a portion of the siege. One day, during this time, as he came out from dinner at the Pavilion Hotel in that city, a large shell from the "Swamp Angel" battery struck the hotel and exploded. Hoffman remarked to a companion, Mr. J. C. Duncan, now manager of the Western Union office, at Knoxville, Tenn., that that was the first shell he had heard. After the war Mr. Hoffman went to Washington, working there several months. When the wires were restored to the companies, he returned South, working in several of the principal offices. At his death he was chief operator of the Western Union office at Mobile, Ala., having held that position for eight years.

Hoffman was very well known to the fraternity in the South, and the article in reference to him published in THE OPERATOR of December 15, has called forth many letters from telegraphers in that section, including one from Mrs. E. E. Hoffman, widow of the late Samuel J. Hoffman, all of whom agree that Davis, *alias* Soule, could have had nothing to do in the matter of initiating Hoffman into the business. From the above it will be seen that Hoffman learned the business fully sixteen years ago, and not nine, as "Davis" states, and this, taken in connection with other matters, as well as the fact of Soule's record as a telegraph college "professor," and more recently a defaulter, should satisfy the reader that Davis, *alias* Soule, merely desired to get what money he could from deaf mutes by persuading them of their wonderful adaptability for the telegraph business. It is pleasant, however, to know that the Atlantic and Pacific Company, whose service he abruptly left, taking what money belonging to that corporation he could lay his hands upon, has had Mr. Soule arrested and taken to Philadelphia, thus effectually interfering with his proposed little scheme of flooding the already overcrowded telegraphic market with deaf mute operators. Mr. Hoffman, it may be well to add, was the only deaf mute operator who ever worked in the South, and the only one, in fact, that we have ever heard of in this or any other country. He received messages by keeping his hand on the sounder, which he said he could hear quite distinctly. He could not, however, hear it unless his hand or some portion of his body touched either the instrument or the table. Upsetting a chair, or striking the floor with anything, seriously interfered with him; other sounds he did not hear. We acknowledge our indebtedness to Mr. J. C. Duncan, of Knoxville, for much of the above information, which we think will prove of interest to the readers of THE OPERATOR.

Mr. Edison's Phonograph.

It will be remembered that a few issues ago we spoke of a new invention by Mr. Thomas A. Edison, so constructed as to reproduce spoken words. Mr. Edison has made further progress in developing the phonograph, and last week gave a private exhibition of it in this city before a number of newspaper and telegraph men, who pronounced it one of the most wonderful contrivances of the day. The instrument is composed of a brass cylinder about four inches in diameter and about ten inches long, with axles ten inches long, on which a thread is cut, coming from either end and passing through nut journals. To one of these axles a crank is attached, by which the cylinder is turned, moving either way as the crank is moved. This cylinder, from one end of it to the other, has small lines cut into it and running around it. By the side of the cylinder, and resting on it, is a pin attached to a vibrating plate, over which is a mouthpiece with a small hole leading to the plate immediately over the hole. When the phonograph is to be used a sheet of lead paper is spread over the cylinder, the words or sounds to be reproduced are made very close to the mouthpiece, and the vibration in the air occasioned by their utterances causes the plate to move, and the pin indents the lead paper upon the cylinder, which, by the way, is turned by means of the crank during the operation. The words being spoken, the paper is indented by the pin, and the crank turns the cylinder back to its starting point. A funnel is then placed over the mouthpiece. Mr. Edison used one made of a plain piece of writing paper. The cylinder is then turned over the same space it originally traversed, and the sounds are accurately reproduced and can be heard for several feet around the instrument, varying always with the loudness of the tone in which the words were spoken. After receiving the indentations made by the pin, the lead paper can be taken off the cylinder, and by replacing it at any other time the words can be exactly reproduced. This is what Mr. Edison thinks will make the machine practically valuable.

Mr. Edison sang in the instrument "Tommy Make Room for Your Uncle." Those present merely expected that when the funnel was placed over the mouthpiece they should only hear inarticulate words reproduced, but were astonished to hear the words of the song quite as plainly as when uttered by Mr. Edison. The effect of turning the crank slowly was then tried, and the slower it moved the deeper was the sound of the reproduction. As the crank was moved faster they came again in a shrill tenor.

Mr. Edison then said to the instrument, "Now is the winter of our discontent made glorious summer," &c. Turning the crank slowly a *Richard* was heard to speak with deep and diabolic voice. Turning the crank rapidly the same words were heard in a shrill and petulant voice, as though *Richard* was in a bad humor and did not care to play his part.

A reporter present was invited to say something to the phonograph. He approached the machine and remarked, "The world is mine oyster and I shall not want." The instrument was readjusted, the crank turned again and all that could be heard was "shall." The reporter was embarrassed, but Mr. Edison explained that the word "shall" had been so emphasized that the other words were lost in the reproduction.

Canadian Telegraphers' Insurance Association.

The third annual meeting of the Canadian Telegraphers' Mutual Insurance Association was held at Montreal, December 12th, and was largely attended. The President, Mr. Chas. Bourne, in his report, congratulated the Association on its prosperous condition, and said that the number of members in good standing at last annual meeting was 337, since which time 78 new and 5 delinquent members have been added to the number, while 79 members have been dropped from the roll through non-payment of dues or assessments, leaving the present membership at 341. The balance on hand at last annual meeting was 508 54.

Receipts for the year including assessments.....	\$1,700 03
Disbursements, including \$1,230, paid heirs of deceased members.....	1,531 32 168 71

Leaving a balance of \$677 25

The amount received for assessments on the death of Geo. Sanders was \$610, and on the death of A. P. Caron \$620, which sums were paid in full to the heirs of deceased.

We are pleased to find the above association in so promising a condition, and hope that Canadian telegraphers will embrace the excellent opportunity it offers for cheap and reliable insurance.

Answers to Correspondents.

Which is the best telegraphic book published including life of Prof. Morse. How is Prescott's Electricity? Please answer in next issue of THE OPERATOR.—Operator, Myerstown, Pa., Dec. 24, '77.

The best and most complete life of Professor Morse is undoubtedly that by Dr. Prime, advertised in another part of this paper, price, \$5. "Lightning Flashes" also contains a short, succinct life of Morse from the pen of the well-known historian, Benson J. Lossing, LL.D., which probably contains about all that most operators require to know of Professor Morse's career, and, by the way, there is no operator in America but what should know at least as much as is there given of the life, vicissitudes and triumphs of the great Father of the Telegraph. Mr. Prescott's work does not contain a life of Professor Morse, but aims to be a history of the art of telegraphy.

Premiums for Clubs for "The Operator."

For 2 Yearly Subscriptions, One Pack of Visiting Cards and Engraving of Prof. Morse.	
" 3 "	Copy of "Oakum Pickings."
" 5 "	Copy of THE OPERATOR, 1 year.
" 6 "	One No. 6 Exercising Tube.
" 7 "	Copy of "Lightning Flashes."
" 9 "	"Lightning Flashes" & "Pickings."
" 12 "	OPERATOR, "Flashes" & "Pickings."
" 15 "	An A Sounder or Learner's Outfit.
" 18 "	Goodyear Health Lift Complete.
" 24 "	Health Lift and copy of "Flashes."
" 30 "	A Nickel-Plated Relay but little used.
" 45 "	A Splendid New Nickel-Plated Relay.

A MUTUAL benefit association, called the Gold & Stock Life Insurance Association, was organized by the employes of the Gold and Stock Company, in this city, January 7th. The principle upon which it works seems to be a very excellent one. In case of a death, each remaining member is assessed fifty cents per month for one year, the amount thus accruing being paid in full in installments to the heirs of deceased. We shall probably refer to the matter more in detail next issue.

WE neglected to say in last issue that we have decided in future to run only one volume of THE OPERATOR every year, instead of two, as formerly, and to let the volume commence with the new year. Volume nine therefore commenced with last number, and volume ten will begin on the first of January, 1879. Of course this change will make no difference in the matter of the expiration of subscriptions.

A quo warranto having been issued at the instance of the Attorney General against the Western Union Telegraph Company, to show by what authority it exercised the rights and franchises of a telegraph company in the State of Pennsylvania, a petition was filed January 11th, in the office of the Court of Common Pleas, Philadelphia, for the removal of the case to the United States Circuit Court. The petition was accompanied by a bond for \$1,000, and as the removal is a matter of right the case will go to the last named court.

THE officers of the Continental Telegraph Company report that very satisfactory progress has been made since the last issue of THE OPERATOR in the way of securing subscriptions to the capital stock, organizing the company, and making preparations for business. Work on the line between New York and Philadelphia, it is expected, will be commenced in a day or two, the preliminary arrangements being now completed. Other lines will be started as soon as the frost is out of the ground. The new company proposes introducing several new features in its business, of which we shall probably refer to next issue.

HELEN treats us men folks to quite a vigorous lecture in this issue, which will well repay perusal and careful study. It is good for us sometimes to "see ourselves as others see us." We think, however, that her late illness must have made Helen look somewhat upon the dark side of the picture. What she says is unquestionably true of a very large number of people, who, it is to be hoped, will be benefited by her remarks, but then telegraphers, as a class, we should like to have her believe, are exceptions to the rule. It is only those who fall from grace and go into the hardware business that cut up in the way she mentions.

When the consolidation of the Western Union and A & P. lines on the Pacific Coast was announced, the public and the newspapers in that section made no attempt to conceal their dissatisfaction with the new arrangement. The opinion was general that rates would be at once increased, and the Western Union Company was very frankly told what the people thereabouts thought of it. Whether the feeling on the subject was taken into account or not, cannot, of course, be said, but at all events Mr. Gamble has written to some of the papers to say that not only is there to be no increase of rates, but that a reduction of from 10 to 33 per cent. will be made where the rates are at present considered too high. The "additional five word" system is also to be abolished on the Pacific Slope, and the single word rate after the first ten brought into operation as in the Atlantic States. The consolidation of the two companies took effect on the first of January. The Western Union does not seem to take public opinion into account here in the East, at least it goes right along quietly but steadily increasing rates wherever there is an opportunity.

Themes for the Thoughtful.

He makes no friend who never made a foe.
The merit often lies in finding merit out.
A coward never forgives; it is not in his nature.
Less is generally required to gain love than hatred.
Prodigals are rich for a moment; economists for ever.

Never offer advice to prosperity; to adversity offer relief.

Habit, with its iron sinews, clasps and leads us day by day.

Money is always well spent in purchasing tranquillity of mind.

One enemy is too much; as much may be said of a thousand friends.

Never turn a blessing around to see whether it has a dark side to it.

Dignity is expensive, and without other good qualities is not particularly profitable.

Time, with all its celerity, moves slowly on to him whose whole employment is to watch its flight.

Perseverance accomplishes more than genius—for itself; a genius is a rich blessing for society; to itself—a curse.

Show me the man who knows what life is, who dreads death; and I will show thee a prisoner who dreads his liberty.

God will not let any apparent evil come into our lives from which we cannot wring some good to ourselves or others.

Among men of the world comfort only signifies a great consideration for themselves, and a perfect indifference about others.

Nothing is so modish as an agreeable negligence. In a word, good-breeding shows itself most, where to an ordinary eye it appears the least.

Never contradict, and you will seldom be contradicted; those who tolerate error, are more graciously received than those who offer to amend.

A more glorious victory cannot be gained over another man than this, that while the injury began on his part, the kindness should begin on ours.

Our studies will be forever, in a very great degree, under the direction of chance; like travelers we must take what we can get, and when we can get it.

Addison well says that "Envy is a tax which men must meet who become distinguished. The oak receives a lightning stroke which the fragile escapes."

Home should be made so truly home that the weary, tempted heart could turn towards it anywhere on the dusty highway of life and receive light and strength.

Fame is not won on downy plumes nor under canopies; the man who consumes his days without obtaining it leaves such marks of himself on earth as smoke in air or foam on water.

Repose and cheerfulness are the badge of the gentleman—repose in energy. The Greek battle pieces are calm; the heroes, in whatever violent action engaged, retain a serene aspect.

There is no object in nature and the world without its good, useful, or amiable side. He who discovers that side first in inanimate things is sagacious; and he who discovers it in the animate is liberal.

An honest reputation is within the reach of all men; they obtain it by social virtues and by doing their duty. This kind of reputation, it is true, is neither brilliant nor startling, but it is often the most useful for happiness.

There is a Russian proverb which says that misfortune is next door to stupidity, and it will generally be found that men who are constantly lamenting their ill-luck are only reaping the consequences of their own neglect, mismanagement, imprudence or want of application.

People make a great mistake about heaven. They think it begins up yonder, but it really begins down here. If you can be happy in a basement story, you are fitted to enjoy the happiness of the upper stories. But if you whine and moan here, heaven itself can't change your mood.

(CONTINUED FROM PAGE 5.)

more comfortable room and went up-stairs into a little garret. And she denied herself her accustomed dinner at the office, contenting herself with bread and cheese—or often simply with bread—which she could take in her pocket. And she washed her own clothes and mended even her own boots, so that still she might send a part of her earnings to the sick one.

"Is she better?" Abraham asked her one day.

"It is so hard to know, Mr. Hall. She writes just as she feels at the moment. I am afraid she fears to return to the office."

"Perhaps it does not suit her."

"I suppose not. She thinks some other kind of life would be better for her. I dare say it would."

"Could I do anything?" asked the man, slowly.

Could he do anything? Well, yes. Lucy at least thought that he could do a great deal. There was one thing which, if he would do it, would make Sophy at any rate believe herself to be well. And this sickness was not organic—was not, as it appeared, due to any cause which could be specified. It had not as yet been called by name—such as consumption. General debility had been spoken of both by the office doctor and the one at Hastings. Now Lucy certainly thought that a few words from Mr. Hall would do more than all the doctors in the way of effecting a cure. Sophy hated the telegraph office, and she lacked the strength of mind necessary for doing that which was distasteful to her. And that idea of a husband had taken such hold of her that nothing else seemed to her to give a prospect of contentment. "Why don't you go down and see her, Mr. Hall?" she said.

Then he was silent for awhile before he answered—silent and very thoughtful. And Lucy, as the sound of her own words rested on her ears, felt she had done wrong in asking such a question. Why should he go down unless indeed he were in love with the girl and prepared to ask her to be his wife? If he were to go down expressly to visit her at Hastings unless he were so prepared, what false hopes he would raise; what damage he would do instead of good! How, indeed, could he possibly go down on such a mission without declaring to all the world that he intended to make the girl his wife? But it was necessary that the question should be answered.

"I could do no good by that," he said.

"No; perhaps not. Only I thought—"

"What did you think?" Now he had asked a question, and showed plainly by his manner that he expected an answer.

"I don't know," said Lucy, blushing. "I suppose I ought not to have thought anything. But you seemed fond of her."

"Fond of her! Well; one does get fond of kind neighbors. I suppose you would think me impatient, Miss Lucy,"—he had never made even this approach to familiarity before—"if I were to say that I am fond of both of you."

"No, indeed," she replied, thinking that as a fondness declared by a young man for two girls at one and the same moment could not be interesting, so neither could it be impertinent.

"I don't think I should do any good by going down. All that kind of thing costs so much money."

"Of course it does, and I was very wrong."

"But I should like to do something, Miss Lucy." And then he put his hand into his pocket, and Lucy knew that he was going to bring forth money.

[TO BE CONTINUED.]

Deaf Mutes as Telegraph Operators.

Referring to the article in last issue of THE OPERATOR, headed "Deaf Mutes as Telegraph Operators," I would say that the "J. C. Davis" spoken of is our famous college professor Julian Soule. He advertised for deaf mutes in New York after he had fled from this town with all the money he could control. Mr. Pepper is in error, however, in doubting the possibility of deaf mutes telegraphing. Mr. Hoffman, who has a brother still in the business, was a deaf mute, and once worked in Philadelphia, though he was, at his death, chief operator at Mobile. I doubt, however, if Soule, *alias* Davis, ever saw Hoffman. The latter did read in a curious manner by touch, holding his hand on the armature of the sounder while receiving.

PHILADELPHIA, DEC. 18TH. SUBSCRIBER.

In your last issue mention was made of the advertisement of one Davis, of Philadelphia, who proposes to teach deaf mutes telegraphy, and he refers to a student of his named Hoffman. A few facts may not be out of place in regard to Hoffman, whom Davis claims to have taught nine years ago

in Philadelphia. Hoffman learned the business some twenty years ago in the South, and was an expert operator before the war. During the war he worked in Richmond, Va., and after the war, he worked in Washington for the American Telegraph Company, about the year 1865. He never was a deaf mute. He lost his hearing entirely after he became a good operator, but he was far from being a mute, as any one who ever abused him to his face can testify. He died in Virginia a year or so ago, where he had gone for his health. If the aforesaid Davis can bring no better evidence than he cites in the case of Hoffman, he had better go into some other line of business. Hoffman was an expert operator, and read by touch. He placed his left hand on the lever of the sounder and his knee against the leg of the table, and could receive as fast and as correctly as any one could. He was chief operator at Mobile at the time of his death. He was called Dummy Hoffman, but could talk volubly enough when angered or excited.

WASHINGTON, DEC. 27TH.

THE OPERATOR of 15th inst. contains some interesting clippings from two leading eastern papers, anent the practicability of deaf mutes becoming proficient telegraph operators: One J. C. Davis, of New York, claims that they are remarkably apt at learning the business, and points to the fact that one of his pupils of the name of Hoffman, did attain the proficiency of a first-class operator. Mr. H. M. Pepper, *per contra*, scouts the idea of a person who cannot hear becoming an operator at all, and claims, at best, that he can become only a very poor "register" operator of the old school. He puts forth some very sensible and effective arguments in support of this theory, which, I daresay, are applicable in most cases. However, it is not my purpose to enter into a discussion of this subject, but merely, as a matter of history, to indorse such portion of Mr. Davis' statement as refers to the case he cites—that of Hoffman. Many of the fraternity will remember Samuel Hoffman, the deaf operator. He was absolutely "as deaf as a post," but was a strictly first-class operator, in every respect. About seven years ago, perhaps less, he was employed in the St. Louis Western Union office, where he received "night report" from Cincinnati, on the circuit afterward made famous by the extraordinarily rapid sending of Bert Ayres. At that time he made use of a sounder of his own construction, and received by placing his hand over the sounder in such a manner that he could feel distinctly every vibration of the armature. He would receive by the hour without "breaking," and experienced no difficulty except when the wire worked hard, and the circuit changed frequently. This he overcame, however, by placing his fingers on the binding screws of the relay, distinguishing the characters by the variations of the current. Hoffman afterward worked in Washington, and from there proceeded to Mobile, Ala., where he held the position of chief operator in the Western Union for a number of years. He resigned that office about a year since, and went to Florida, where he shortly afterward died. He was a most thorough operator and electrician. There is not at present any deaf operator in the service, either at Mobile or Montgomery, as claimed by Mr. Davis, and I have never heard of any such except Mr. Hoffman.

NEMO.

NEW ORLEANS, DEC. 30TH.

The Boston Press on "Lightning Flashes."

A handsome volume.—*Sunday Herald*.

Full of humorous stories and funny experiences, and will be thoroughly enjoyed by all classes of readers.—*Transcript*.

It is amusing and interesting for any reader, although of more value to telegraphers than to persons outside of that profession.—*Globe*.

The contents are very varied, comprising story, sketch, biography, reminiscence, poem, etc., all having a more or less direct connection with the business of telegraphy.—*Journal*.

"Lightning Flashes" is a very readable, chatty volume, compiled and published by Mr. W. J. Johnston of New York, and made up exclusively of contributions from the pen and pencil of the telegraphic fraternity. Its sketches are pat to the profession, and some of them evince considerable literary talent. Although of peculiar interest to telegraphers, the work is not without value to the community at large, by it a somewhat clearer insight being gained into the trials and troubles and perplexities, as well as the humors of a life in the operating room. "Lightning Flashes" is a healthy addition to telegraphic literature.—*Traveler*.

Two Sides of a Story.

The Cincinnati *Enquirer* published, two or three weeks ago, a letter signed Mrs. Fanny C. Atkinson, in which the writer said that if her husband, who had brought her to Indianapolis and there deserted her, did not return and acknowledge her, she would, two days and a half afterward, end her existence by suicide. We have received from Mrs. Atkinson the following letter:

CHICAGO, Jan. 2, 1878.

EDITOR NEW YORK OPERATOR:—Please publish this in your paper. My husband takes the paper, and I want him and all other operators to see and know of this death and desertion. My husband was an operator in the A. and P. telegraph office here. He took me to Indianapolis on the 6th of December last, where he robbed me of my dead husband's gold watch and chain, my trunks and all my clothing, except what I had on my back, and left me penniless on this cold world to finish my journey alone, deserting me for one Lizzie Moore, or Belle Travis, living in Newark, N. J. He is married to her, so I hear from a gentleman who called on me this evening and told me all. Now I am bridled in my robe for death; no one knows my troubles but God and my husband that has deserted me and the bride that lies by his side. May this piece in THE OPERATOR drive their hearts to sympathy and care for the dead wife and the true, kind heart that Atkinson deserted and left behind. May Heaven reward them while my soul is wandering in the spirit land and my body sleeps in the cold clay, the deserted wife of W. C. Atkinson, operator.

MRS. FANNY C. ATKINSON,
76 West Randolph Street,
Chicago, Illinois.

Nearly three weeks ago we received the following letter from the alleged husband, dated Philadelphia, December 20th, which, not knowing anything more of the case than is here given, or has appeared in the papers, we think it but fair to give in this connection:

W. J. JOHNSTON, ESQ.—DEAR SIR: If any of your agents or outside parties send you anything for publication in regard to my deserting a supposed wife, you will oblige me by withholding it, as the woman who is going around and calling herself such is nothing but a common woman, a liar, and a dead beat, and is trying to do all in her power to blacken and ruin my character by her infamous lies, and only because I would have nothing more to do with her. She is not, never was, and never will be a wife or anything else to me; and as such I denounce her and her stories as lies of the first water. I may be in New York in the course of a week or two and stop and see you, and, if you think any explanation is necessary, will then try to do so. But I do not want my name heralded throughout the country and especially charging me with a crime I never committed. Yours, very respectfully,

W. C. ATKINSON,
Telegraph Operator, A. & P. Tel. Co.,
Chicago, Illinois.

We might add that up to the time of going to press we have not heard anything from Chicago as to whether Mrs. Atkinson did commit suicide, or in fact anything else on the subject; neither have we received a call from Mr. Atkinson.

Another Telegraph College Closed.

We have received a printed postal card which says: Two brothers, named Henry Bigelow, *alias* Frank Angell, and Frank Bigelow, held for burglary, escaped from Waterville, Thursday night. One is about twenty-five years old, about five feet ten inches tall, Roman nose, high cheek bones, pecked face, dark eyes, black hair, black moustache and imperial, carries his head high and acts important—the forefinger on right hand is crooked. He wore black frock coat and vest, dark brown pants, black hat. The other is about twenty three years old, five feet eight inches, light complexioned, high cheek bones, light side whiskers and moustache, dark colored—hair combed behind the ears. They are both telegraphers and good penmen. A liberal reward for the arrest of one or both.

WM. BARDEN, Waterville, N. Y.

Referring to the above, a correspondent says, that the "birds of flight" alluded to, were the proprietors and "faculty" of the "late" Bigelow Telegraph Institute and Writing Academy, which opened in Waterville, Dec. 1, with a grand flourish and three students at \$5.00 per month each. Henry W. had been discharged from the employ of the D. L. and

W. R. R. Co., late in the fall, and was joined by his brother Frank a few days later, who had a similar excuse for leaving the P. and K. C. R. R. Co., at Karns City, Pa. Soon finding that a "plug factory" would not pay at Waterville, they concluded to go into the "flour and feed" business, and "opened" a mill, at dead of night, taking a sample of about 200 pounds home, considerable of which, however, was strewn along the road, and afterward traced up by the officers. The house was searched, and flour found in such quantities and under such circumstances, as taken with other suspicious signs, and their confused explanations led to their arrest for burglary. They were examined and held for trial, bail being fixed at \$500 each, which they were unable to furnish. The officer was probably more lenient with them than he would have been had they not so recently been connected with so flourishing an institution, and took them home with him to spend the night, when they escaped by jumping from the second story window. The "Institute" has ceased to exist, nothing now remains to remind one of its past glory except the cotton cloth sign on the top of the fence post. A relative has foreclosed a mortgage he held on the instruments, and now its former patrons are anxiously inquiring the proper course for obtaining their "diplomas," which will insure them at once a fifty dollar job. Thus endeth another "gigantic swindle," and the ambitious dreams of three would-be "plumes."

More Telephonic Induction.

I learn the following, to me singular facts, from the night operator at Waynesboro, Va., on the C. and O. R. R. Mr. F. says: "A few nights since noticing a strange sound in my relay, I put my ear within a few inches of the magnet, and heard some one singing 'The Sweet Bye and Bye';" a few minutes after I heard "Dixie." I could not catch the words, but heard every note distinctly. Sending messages did not interfere with the music." A Mr. Brown Ayres was using the telephone in Staunton, twelve miles from Waynesboro, at the time. Is this a new feature of the telephone? An explanation through the columns of your valuable paper would relieve the minds of some of us unenlightened in this community of a fearful pressure.

C. R. WINFIELD.

BROADWAY, Va., Dec. 23d.

Appropos of the above, a prominent drug firm having a store in each end of Kingston, N. Y., two miles apart, have recently established a telephonic connection, and have now in daily use a set of Bell's new telephones, which seem to work admirably. An accurate and experienced Morse sound reader chanced to be in the down town store of the above firm, and while having the telephone to his ear heard what he thought to be the clicking of an instrument. He took pencil and paper and wrote what he heard, which proved to be a message from the Western Union office there, which was passing over their wires. He went immediately to that office and asked the operator if he had just sent the message which he then read to him from his telephonic notes. The Western Union man replied that he had, and could not possibly conceive how this gentleman had obtained it. All the explanation that can be given in regard to this is that for a short distance both the telephone wire and those of the Western Union main line are strung on the same poles.

The New York Wire Club.

Thou hast seen two streamlets gushing
From one fountain, clear and free,
But by widely varying channels
Searching for the sea.

Glideth one through greenest valleys,
Kissing them with lips still sweet,
One, mad roaring down the mountains,
Stagnates at their feet.

A spirit of hilarity brooded gently over the magnificent new rooms of the New York Wire Club, on 5th Avenue, when the members assembled for their first meeting in 1878.

President Gibbons, being convalescent, called the meeting to order. He congratulated the assemblage upon their new departure, wished telegraphers a very happy New Year, and stated that although his illness had been severe, he was not yet going to the Great Beyond (applause).

Messrs. Howlett, Baldwin, Welsh, and Moffatt sang "Tenting on the Old Camp Ground."

Denny Harmon informed the meeting that great

excitement prevailed in front of the club-room, anxious brokers, shrewd capitalists and Wall Street speculators darted up and down the entrance steps, buttonholing operators and overturning small boys in their insane desire for the latest intelligence (applause).

At precisely nine o'clock, P. M., Mr. Theodore F. Taylor appeared leaning on the arm of James F. Crate, who in a few appropriate remarks, introduced Mr. Taylor to the audience. The latter gentleman said that it was true as announced in the Stock Exchange that he had been appointed traffic manager of the Western Union Telegraph Company (tremendous applause). "My hours" said he in a ringing voice "are from 8 to 3" (cheers).

Mechanical Engineer Bob Morris excused himself for being late. He was glad to meet so many young people at the beginning of the New Year, and he quoted the beautiful sentiment of Mr. Beecher, "we sleep, but the loom of life never stops; and the pattern which was weaving when the sun went down, is weaving when it comes up to-morrow" (applause).

John Brant wished the Naval Observatory at Washington and its auxiliary in New York to understand that in the future he would not loan his chronometer balance watch to regulate the upward movement of the time ball (applause).

Sergeant at-arms, Dad Benett announced that an express wagon containing Mr. L. E. Weller and a parlor organ were in waiting at the door. The Chair appointed a committee consisting of Miles O'Reilly and John White Kelly to conduct the gentleman into the room. After a brief prelude the genial face of Supt. Weller beamed upon the audience, and in a neat speech he presented the parlor organ to the club and sang "I Dream of Power."

The reporter of THE OPERATOR returned thanks to the ladies for their ecomiums on his Christmas report, and added "there are but two fine things in the world—ladies and roses" (applause).

Mr. Lambdin denied the rumor that he was to have charge of an elevator (applause).

President Gibbons in adjourning the meeting returned thanks on behalf of the members for the beautiful and useful present received that evening. It was another proof, he said, that "one touch of nature makes the whole world kin."

Baltimore Notes.

* The gold and stock office has been removed from German and South to the main office, with A. Wilson, Jr., manager, *vice* A. G. Davis. The company works a quadruplex to New York, operated by Miss Clara Utley and N. A. Johnson. Miss Utley is the first lady operator to become a member of the Baltimore force. Mr. J. L. Buckman, of the Baltimore night force, and Mr. Farley of Philadelphia, have changed places. The former recently married one of the Philadelphia belles. Messrs. Gamerrill & Co. have completed the new fire alarm and police telegraph in this city, which is said to be one of the finest in the United States. The telegraphers' excursion down the bay, last August, having been so grand a success, it is determined to give a ball at Masonic Temple, February 4, 1878. Invitations are extended to the operators in neighboring cities.

I had occasion last week to visit the Atlantic and Pacific office. To say that I was shocked would but feebly express my feelings as I gazed upon the sad remnants of that once flourishing company. Three months ago the force consisted of nineteen operators and six clerks. To-day they have but seven. Operators: Messrs. Stewart, Hicks, Teakle, Connor, Griffin, Davis and Bandal, and three clerks. And even for this small force it seems a difficult matter to find sufficient work. It seems that the rapacious maw of that unmerciful monopoly, the Western Union, is not yet filled. Its latest "gobble" in this city embraces the Gold and Stock Co. The force at the Western Union office still remains intact. No new arrivals with the exception of Mr. Tom Farley from Philadelphia. Messrs. Eastlake, Gentry, and Groff of the Atlantic and Pacific were served with writs of ejectment December 1st. Miss C. Millicent Utley, of the same office, goes into the Western Union office January 1, thereby depriving the Atlantic and Pacific office of its only redeeming feature. The rumor of a new company about to be started, coming as it does like a *voice de profundis*, has had the effect of creating a more cheerful feeling. It is to be hoped that it will make its appearance soon after the final winding up of the Atlantic and Pacific. Of the lucky ones who made their escape before the crash, I might mention Bob Davidson, Al Pennock, Joe Wright, Henry Clay Clag-

gett, and Mike Landy, who secured positions on the B. and O. R. R., Dave Kennedy, appointed train dispatcher of a railroad near this city. Harry Smith has secured a position as man milliner in Worth's, Paris, at a salary of nine thousand francs a year. Not wishing to intrude upon your valuable space, I will close by saying, that of the few blessings bestowed upon us poor unfortunates there is not one so great as that of receiving and reading—after a hard day's work—a copy of your newsy little sheet. It does more good than all the medicine prescribed for the ill flesh is heir to.

R. E. LAY.

Dashes Here and There.

It is said that the prairie hens are being killed in great numbers out west by striking against the telegraph wires.

It is now proposed to reach the north pole by balloon. Telegraphic communication is to be kept up. Pity they couldn't get Prof. Loomis' aerial telegraphy perfected in time. It would be just the thing.

The telephone has been tested at Milan over a circuit representing, in the aggregate, 1,000 miles of distance, and yielded splendid results. The sounds transmitted, though weak, and appearing to proceed from indefinite distances, were perfectly recognizable, as also the voices of the transmitting persons.

NEW APPLICATIONS OF THE TELEPHONE.—At the recent meeting of the Society of Arts, in London, Prof. Graham Bell showed two new applications of the telephone, one to the dress of a diver, and one to mining purposes. Special arrangements were required in the former case to insure the reproduction under the pressure of the air in the divers' helmet of the sounds uttered above in air of the ordinary atmospheric pressure. These difficulties have, however, been overcome, and a most valuable means is now available for the diver. The second apparatus shown was intended to record the revolutions of an anemometer, and so enable the condition of the ventilation of a mine to be observed at the surface. In this an ordinary telephone repeats the little "tick" made by a piece of watch spring engaging with the cog-wheel of the anemometer, and thus caused to vibrate beside the pole of a magnet.

AN ADMIRABLE BOOK.—We have received from the publisher, W. J. Johnston, New York, a very handsome work entitled, "Lightning Flashes and Electric Dashes." We do not know that we have ever opened a volume that promised more genuine or wholesome entertainment, or that in the reading of which so fully realized our expectations of enjoyment, than did these "Lightning Flashes." The interest of the reader commences with the initial chapter, and from this to the end of the volume there is nothing but a succession of pleasurable surprises. Of course the burden of most, if not all, the articles is of magnetic telegraphy, but the history and experience of that wonderful art is brimful of wisdom, fun, humor and wit, of which Mr. Johnston has taken advantage, and given us a volume that will take a high rank among the encyclopedias of anecdotal literature. The volume contains a number of finely executed engravings, illustrative of various parts of the text, while the binding and embossing are of the most superb character. Altogether the book is one of the best issues of its kind during the season, and should command a very large sale.—Harrisburg Pa., *Independent*.

A LECTURE ON PROF. MORSE.—Mr. A. M. Waddell, of North Carolina, delivered a lecture, entitled "Two Great Americans—Morse and Maury," in this city on Tuesday evening last. Mr. Waddell spoke of the invention and perfection of the electro-magnetic telegraph by Morse as the crowning triumph of the human intellect in this field. Then followed a brief biographical sketch of Morse. Mr. Morse, said the speaker, was educated as an artist, and intended to pursue that profession, but, becoming interested in some experiments in electricity in Paris and elsewhere, he finally conceived the idea of this machine, which has made his name immortal. A history of his struggles through poverty to have his machine brought into use both in this country and in Europe, and of his final triumph by the passage of the bill by Congress for testing it, and of the result of the celebrated experiment in laying the wires between Baltimore and Washington, was rapidly given by the lecturer, and then this part of the address was concluded by a description of the effects of the discovery of the telegraph upon civilization and the perpetuation of Morse's fame in connection with it.

CHARLES H. SMITH, a telegraph operator of Munster, Ill., was returning on New Year's night from a party, walking along the railroad track, when suddenly, on the middle of a trestle bridge twenty-five feet high, he was stopped by an armed tramp, who forced him to throw up his hands and surrender his revolver, sixty dollars in cash, a valuable gold watch and some jewelry. "Well, old boy," said the highwayman, in delight, "you are pretty well heeled, and he ordered his victim to hand over his ulster, dress-coat, and vest. As Smith took off his vest he watched an opportunity, and with a desperate push hurled the robber from the trestle work upon the ice twenty-five feet below. Hurrying back for assistance, on his return he found the highwayman lying senseless, seriously if not fatally wounded, on the ice, with all his plunder, and the man was soon in jail. We hope the Executive Committee of the Western Union Company will not see this item, as they might consider the fact of an operator being possessed of sixty dollars in cash, a valuable gold watch, and some jewelry, sufficient reason for another reduction of salaries.

Is this More of Hallahan's Swindling?

Some time ago a gentlemanly appearing man advertised in this city for a lady telegraph operator and four pupils at telegraphy, promising a permanent situation to each of the applicants upon finishing a prescribed course of instruction. More than twenty pupils were secured by the advertiser, who required from each an advance fee of \$25. When each pupil had received three or four lessons, the teacher abruptly disappeared, leaving his victims to guess at his whereabouts or time of return. After prolonged waiting it became only too evident that the man was a fraud. One poor girl had borrowed the means for obtaining her instruction and engaged board on credit, and there were doubtless others who could ill afford to lose the money paid. More than that—there was no way for them to obtain legal satisfaction for this breach of contract, except by tedious civil process, the criminal law overlooking such transactions.—*Boston Herald.*

Echoes from 197.

Several engagement rings are to be seen in the ladies' department since New Year's Day.

Mr. James E. Stark has been transferred from the Providence and Hartford quadruplex to the C. N. D. Department.

Fancy work has been prohibited in the ladies' department, and the dear creatures are very indignant. Only plain sewing in future; sew they say.

Mr. Fred N. Bassett, who formerly worked the Buffalo wire in this office, is now Mr. Phillips' assistant in the Associated Press rooms. He is a thorough gentleman.

Miss Millie Hibbard, of the Atlantic and Pacific, remarked to one of the ladies that "she'd like to see her name in THE OPERATOR." We are very much crowded with matter, Millie, but still we'll oblige you.

The staff at 197 is to be reduced by giving about twenty of the ladies and gentlemen who last joined the force there, a compulsory vacation of a month or six weeks. If business permits it, they will then be re-instated.

On Christmas Day Tom Allen was the recipient of a handsome copy of "Back-Log Studies" from Mr. Walter P. Phillips of the Associated Press. Many years ago these gentlemen worked together in New England on the old Shore wire.

PERSONALS.

Miss Maggie J. Nutter is manager of the Western Union office, Portsmouth, N. H., and Miss Thornton assistant.

A correspondent says: Your paper is growing more and more popular here, I heard a young lady remark the other day that she would spare her food before she would her OPERATOR.

Mr. J. S. Hunter, late operator at the Military Telegraph Headquarters, Fort Whipple, has been appointed chief operator of the California and Arizona division of the U. S. military line.

Mr. Parvin, of Rock Springs, Wyo., writes, that while employed as night operator for the U. P. at that point he studied astronomy, and has discovered many things in connection with that science which

astronomers do not know. He proposes to write a book on the subject, to be called "The Origin of the Universe and its Motive Power."

Mr. F. B. Knight is manager of the Western Union office at Omaha, Neb. Mr. Knight has been in the business for fifteen or sixteen years, and is a very excellent operator, as well as extremely popular with the boys. There are now fourteen operators and twenty-one employees all told, at Omaha. About fifty thousand messages a month are handled, exclusive of three sets of press reports.

ALBANY, N. Y.—Mr. J. R. Van Wormer, for several years past all night man, has been appointed private secretary to the Hon. Roscoe Conkling, United States Senator. Van will also be Secretary of the Senate Committee on commerce, etc. Mr. Chas. E. Shelley, of the day force succeeds Mr. Van Wormer, nights. Mr. Geo. Smith of the A & P., has been appointed to fill the vacancy on the day force. Mr. Clarence Miller, formerly of the A & P. office, has been engaged for the legislative session at the Capitol and Congress Hall offices, which are run by one operator. Mr. W. A. Austin, (X Y Z) has been confined to his house for the past week by a severe illness, and his pleasant countenance is very much missed. Mr. F. Scott Smith, of Coopers-town, is temporarily filling Mr. Austin's chair. Mr. M. A. Feeney, of the delivery department was married on New Year's Eve, to Miss Anna O'Neil, of Cohoes. Congratulations are in order. "K."

PENN. R. R. AMBOY DIVISION. NOTES.—Beginning at Headquarters, Camden, N. J., we have W. J. Courter, division operator; a better man for the position cannot be found. J. W. Truex, M. W. Maitland, and C. E. Liming are the train dispatchers. Geo. Houtaling, W. H. Stonaker and M. E. Howe, day operators, and Geo. P. Bush night operator. On C & P. Co., and P & H. Road, at Merchantville we have G. W. Wanamaker; West Moorstown, E. Barker; Masonville, B. F. Pullen; Medford, D. T. Carty; Mt. Holly, W. H. Huff, day operator and J. L. P. Eckman, nights; Vincentown, F. Wright; Pemberton Junction, G. D. Gilson; Pemberton, J. H. Hoffman and C. W. Shinn, extra; Lewistown, J. P. Seaman; Wrightstown, E. R. Kirby; New Egypt, G. W. Brown, operator and Chas. H. Horner, extra; Cream Ridge, Hon. J. A. Conover, the great banjo performer; Sharon, J. E. Stevenson. Here endeth the P and H. road. On the C & A. road, at C & B. Co., Junction, we have H. K. Weiler; Riverton, W. F. Kingdon; Delanco, W. W. Deacon; Beverly, W. D. Reid and T. Cahill; Burlington, Geo. H. Allen, day operator; and P. K. Ryan, nights; Florence, W. H. Worrell, day operator and W. C. Coates; Kinkora, W. Burke; Bordentown, W. H. Foley, day operator, Charlie Weiler, nights, and Geo. S. Dougherty, extra; Broad St., Trenton, G. F. Shinn; Newtown, D. W. Vannest; Hightstown, R. M. Earley; Janesburg, T. H. Hale, day operator, and J. Y. Williams, nights; Spotswood, M. C. Britton, day operator, and Mr. Sawyer, nights; Old Bridge, D. V. Stonaker, day operator, and D. C. Vanderbilt, nights; Deep Cut, Emerson & Kunkey; South Amboy, C. F. Laird, day operator, and E. B. Thompson, nights. F & I. R. R.—At Sea Girt, F. McConnell; Square, F. F. Leyman; Farmingdale, C. H. Bond; Freehold, J. S. Baugh; Englishtown, C. E. Dey; Lower Janesburg, G. S. Courier; Dayton, F. G. Stevenson, day operator, and W. V. Wson, nights.

BIRTHS.

Jan. 3, to Mr. Ormond Higman, chief operator M. T. Co., Ottawa, Ont., a daughter.

MARRIAGES.

FEENEY-O'NEIL.—Dec. 31, by the Rev. John Walsh, at St. John's Church, Albany, N. Y., Mr. M. A. Feeney, delivery clerk, W. U. office, to Miss Anna O'Neil, of Cohoes, N. Y.

JONES-WORRALL.—Jan. 2, at Barnsville, Pa., Mr. W. H. Jones, operator Catawissa Branch, P. and R. R. R., Quakake, Penn., to Miss Blanche Worrall, of Media.

CONDON-RAY.—Dec. 25, at Pittsburgh, Pa., Mr. M. P. Condon, of Summitville, Pa., to Miss Mary Ray of Gallitzen. Mr. Condon is day operator at Cresson Power, P. R. R.

ECKLES-LINDSAY.—Dec. 19, at the residence of the bride's mother, by Rev. S. W. Reigart, Mr. DeWitt C. Eckles, agent and operator, to Miss Mary J. Lindsay, both of Mechanicsburgh.

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thus exposed, has left these entirely unharmed. And experi-
mental lines on the isthmus have been equally exempt from
the ravages of the white ant, which destroys wood telegraph
poles so rapidly that iron poles have been substituted.The same qualities which rendered it so indestructible by
all corrosive agents, insure its durability for an indefinite
period in all climates.It can be stored in tropical climates without change of in-
sulation under circumstances which would rapidly deteriorate
and destroy the essential qualities of gutta-percha and
vulcanized india-rubber.The Kerite-covered wire is used almost exclusively by the
United States Navy Department in the torpedo experiments
which have been going on during the past three years. Prof.
Farmer, the Government instructor, says of it, "It fulfills the
conditions required in the torpedo service better than any
insulator with which I am acquainted.""EMINENT ELECTRICIANS AND PRACTICAL TELEGRAPHISTS
commend and recognize the Kerite insulation as superior to
all others."GEORGE B. PRESCOTT, Esq., Electrician of the Western Union
Telegraph Company under date of Sept. 25, 1874, says—"In
September, 1869, we placed some of your Kerite wire, unpro-
tected by any covering whatever, in the tunnel under the
river in Chicago, and have since continued its use in that ex-
posed situation with the most gratifying results. A portion
of the tunnel is very wet, and water saturated with lime con-
stantly drips upon the wires, while in other portions they are
kept alternately wet and dry, which is well known to be one
of the severest tests that any insulating material of an or-
ganic nature can be subjected to; and yet, after five years' ex-
posure, under the above conditions, the Kerite covering
shows no signs of decay or deterioration. An insulating cov-
ering of india-rubber or gutta-percha under a like exposure,
would have been destroyed in much less time."February 12, 1877, he writes further, "This piece of Kerite
wire, unprotected by any covering, was in use in the tunnel
under the river in Chicago from Sept. 1869 until December,
1876, and shows no signs of decay or deterioration in its in-
sulating qualities."Prof. MOSES G. FARMER says, "I have used your Kerite as a
leading wire more or less for four or five years. It stands
abuse, changes of temperature, alternate wetting and drying
better than any insulator I have tried."MESSRS. GANDELL & CO., proprietors of the American Fire
Alarm and Police Telegraph have used the Kerite wire for ten
years. They say: "We have placed it in use in some sixty
cities extending from Halifax, Nova Scotia, on the north to
New Orleans and San Francisco, on the south and west, em-
bracing every variety of climate, and it has proved itself to
be, under all circumstances, the most reliable and indestruc-
tible insulator known to us for telegraphic purposes."Mr. M. A. HARRY says: "I have tried it not only in this
country, but also in Egypt, where it was subjected without
injury, to the most severe treatment. * * * I also had
the Kerite cable for several months in the Mediterranean Sea,
and always found it reliable and unaffected by the ravages of
"teredo."Many other equally favorable and satisfactory commen-
tary letters are in the possession of the proprietor.At the Centennial Exhibition at Philadelphia, SIR WILLIAM
THOMSON, the eminent electrician and scientist, awarded to the

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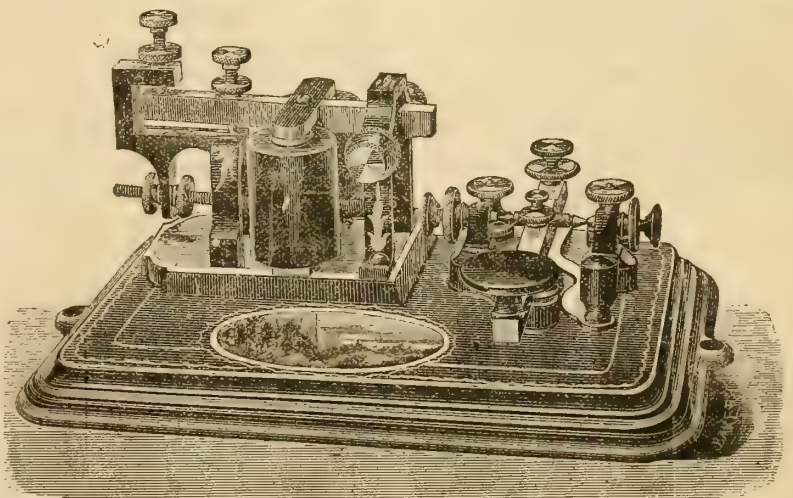
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VOL. IX.

NEW YORK, FEBRUARY 1, 1878.

No. 3

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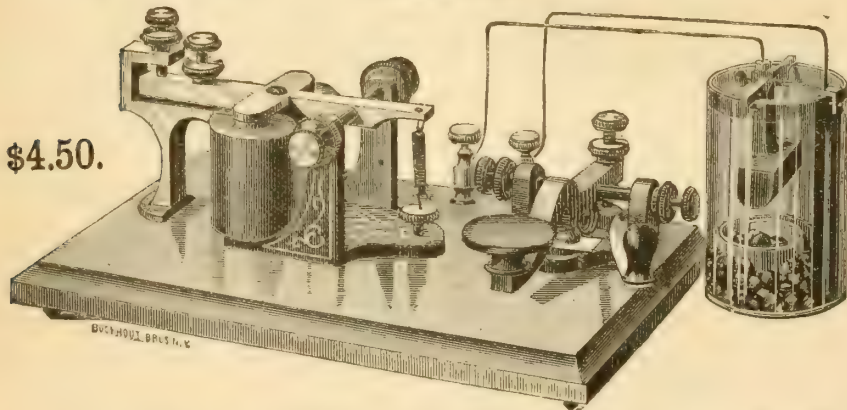
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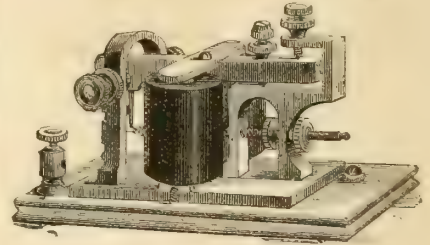
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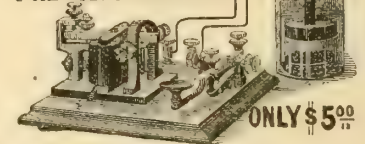
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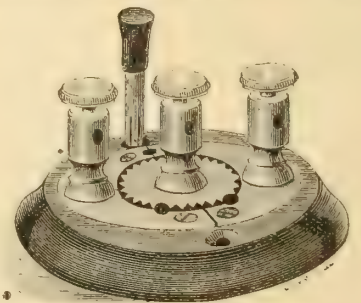
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THE OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY

February 1st, 1878.

Volume IX.

Whole No. 95.

Janet Blair.

BY TOM QUAD.

On what's known as number three
At the station Oskasee
On "the Way,"
Worked Alexander G.
At the key convulsively,
Day by day.

Farther down upon "the Way,"
And with manners somewhat gay
For her years,
Strived a girl with yellow hair,
By the name of Janet Blair,
It appears.

Right here let me relate,
But I grieve the same to state—
Yet I must,
She was pining for a mate,
In the old hymeneal state
Of love and trust.

In dull moments of the day,
Alexander used to say,
In good part,
Many words with meaning fraught
(As Miss Blair had often thought)
For her heart.

But no guile had Mr. G.,
And his talk was very free,
Till he heard
That Janet's tender heart
Had been pierced by Cupid's dart
By some word.

But the end had not transpired,
For the gods—it seemed—conspired
In good sooth,
To mislead the spinster fair,
She with yellow flowing hair
And waning youth.

Alike to town and country, too,
The duplex then was somewhat new,
As you know.
So when Alex said one day,
In his ever sprightly way
Of *Bon mot*,

"To 'double up' would pleasant be
For you, Janet, and me,
By-the-by,"
Was it strange that Janet Blair,
Maiden old, but maiden rare,
Made reply:

"You good soul, Alex dear,
You man without a peer,
Thine am I.
Come down upon the freight,
I will meet you at the gate,
Till then I sigh."

No explanations meet,
Or expressions of retreat,
Made A. G.,
But upon the freight he went,
Yet not Blair-wards was he bent—
But to sea.

Still ponders Janet Blair
O'er this very strange affair
Of A. G.:
For no more at Oskasee
Was he heard convulsively
At the key.

Soliloquy of a Fifty dollar Man.

"Why do I live? the old 'plug' cried,
When better men than I have died."

That's the question that I am just now trying to get through the capillary substance that adorns my cranium. I have been reading H. W. B. on Hell. But I get no consolation from that remarkable effusion. For even if, as he says, there is no hell to go to, I am not at all sure that the W. U. T. won't have

an office in the next world, where they will make me work through all eternity for nothing, and feed me on blue vitriol. Bah!

Why do I live? That's a conundrum. I used to think it a hard matter to exist on the munificent salary of one hundred and eighteen dollars a month. That was in the "halcyon days of yore." The aforesaid company has demonstrated that I can live on less; for it has by degrees successfully demonetized my salary, until I find that I am actually alive and at work for the insignificant sum of fifty dollars.

"Can such things be,
And o'ercome us like a summer's dream,
Without our special wonder?"

I thought I would "hedge" on the company by joining the Consumptive Burial Association—I beg pardon, I should say "The Telegraphers' Mutual Benefit (?) Association." But the best laid plans, etc., etc. Last summer the company aforesaid literally gave me a "rest." And in the "lapse" of time my policy lapsed. In other words, the C. B. A. dropped me off the roll. Where now are the hopes of that stunning big funeral?

Why do I live!
I don't know, I'm sure, but I guess it's because I'm too poor to die.



J. M. Hogan, Milwaukee, Wis.

Mr. Hogan was born in Boston, Mass., September 28th, 1859, and is, therefore, but little over eighteen years of age. When he was three years old his parents moved West, settling in Milwaukee. In 1873 he took up the study of telegraphy in the old Great Western office in Milwaukee, at that time managed by Mr. A. Flowers. After four or five months' practice, he was given the position of entry clerk, and assistant operator doing most of the signal work. After remaining in that capacity for about a year, he resigned to accept a better and more remunerative situation with the North Western Telegraph Company in the same city, which position he still holds. Mr. Hogan, though but little over four years at the business, is a very fair operator. Besides his other good qualities, he is a very energetic worker for THE OPERATOR, having secured both this season and last the largest list of subscriptions to the paper received from any single agent. This alone should certainly entitle him the honor we this day do him of publishing his portrait on our first page.

The Telegraph Girl.

A STORY OF THE ENGLISH POSTAL TELEGRAPHS.

BY ANTHONY TROLLOPE.

Lucy was very poor; but the idea of taking money from Abraham Hall was shocking to her. According to her idea, even though Sophy had been engaged to the man as his promised wife she should not consent to accept maintenance or pecuniary aid from him until she had been made, in very truth, flesh of his flesh and bone of his bone. Presents an engaged girl might, of course, take, but hardly even presents of simple utility. A shawl might be given, so that it was a pretty thing and not a shawl mere-

ly for warmth. An engaged girl should rather live on bread and water up to her marriage than take the means of living from the man she loved till she could take it by right of having become his wife. Such were her feelings, and now she knew that this man was about to offer her money. "We shall do very well," she said, "Sophy and I together."

"You are very hard pinched," he replied. "You have given up your room." "Yes, I have done that." When I was alone I did not want so big a place."

"I suppose I understand all about it," he said somewhat roughly, or perhaps gruffly would be the better word. "I think there is one thing poor people ought never to do. They should never be ashamed among themselves of being poor."

Then she looked up into his face, and as she did so a tear formed itself in each of her eyes. "Am I ashamed of anything before you?" she asked.

"You are afraid of telling the truth lest I should offer to help you. I know you don't have your dinner regular as you used."

"Who has dared to tell you that, Mr. Hall?" "What is my dinner to anybody?"

"Well, it is something to me. If we are to be friends, of course I don't like seeing you go without your meals. You'll be ill yourself next."

"I am very strong." "It isn't the way to keep so, to work without the victuals you're used to." He was talking to her now in such a tone as to make her almost feel that he was scolding her. "No good can come of that. You are sending your money down to Hastings to her."

"Of course we share everything."

"You wouldn't take anything from me for yourself, I dare say. Anybody can see how proud you are. But if I leave it for her I don't think you have a right to refuse it. Of course she wants it if you don't." With that he brought out a sovereign, worth five dollars in gold, and put it down on the table.

"Indeed I couldn't, Mr. Hall," she said.

"I may give it to her if I please."

"You can send it to her yourself," said Lucy, not knowing how else to answer him.

"No, I couldn't; I don't know her address." Then without waiting for another word he walked out of the room, leaving the sovereign on the table. This occurred in a small back parlor on the ground floor which was in the occupation of the landlady, but was sometimes used by the lodgers for such occasional meetings.

What was she to do with the sovereign? She would be very angry if any man were to send her a sovereign; but it was not right that she should measure Sophy's feelings by her own. And then it might still be that the man was sending the present to the girl whom he intended to make his wife. But why—why—why had he asked about her dinner? What were her affairs to him? Would she not have gone without her dinner forever rather than have taken it at his hands? And yet who was there in all the world of whom she thought so well as of him? And so she took the sovereign up-stairs with her into her garret.

When she got up to her own little room with the sovereign, Lucy sat for awhile on the bed, crying. But she could not in the least explain to herself why it was that at this moment she was shedding tears. It was not because Sophy was ill, though that was cause to her of great grief;—not because she herself was so hard put to it for money to meet her wants. It may be doubted whether grief or pain ever does of itself produce tears, which are rather the outcome of some emotional feeling. She was not thinking much of Sophy as she cried, nor certainly were her own wants present to her mind. The sovereign was between her fingers, but she did not at first even turn her mind to that, or consider what had best be done with it. But what right had he to make inquiry as to her poverty? It was that, she told herself, which now provoked her to anger, so that she wept from sheer vexation. Why should he have searched into her wants, and spoken to her of her need of victuals? What had there been between them to justify him in tearing away that veil of custom which is always supposed to hide our private necessities from our acquaintances, till we ourselves feel called upon to declare them? He had talked to her about her meals. He ought to know that she would starve rather than accept one from him. Yes, she was very angry with him, and would henceforth keep herself aloof from him.

But still, as she sat, there were present to her eyes and ears the form and words of an heroic man. He had seemed to scold her; but there are female hearts which can be better reached and more surely touched by the truth of anger than by the patent

falseness of flattery. Had he paid her compliments, she would not now have been crying, nor would she have complained to herself of his usage; but she certainly would not have sat thinking of him, wondering what sort of woman had been that young wife to whom he had first given himself, wondering whether it was possible that Sophy should be good enough for him.

Then she got up, and looking down upon her own hand, gazed at the sovereign till she had made up her mind what she would do with it. She at once sat down and wrote to Sophy. She had made up her mind that there should be no diminution in the contribution made from her own wages. In no way should any portion of that sovereign administer to her own comfort. Though she might want her accustomed victuals ever so badly, they should not come to her from his earnings. So she told Sophy in the letter that Mr. Hall had expressed great anxiety for her welfare, and had begged that she would accept a present from him. She was to get anything with the sovereign that might best tend to her happiness. But the twenty-five cents a day which Lucy contributed out of her own wages was sent with the sovereign.

For an entire month she did not see Abraham Hall again so as to do more than just speak to him on the stairs. She was almost inclined to think that he was cold and unkind in not seeking her; and yet she willfully kept out of way. On each Sunday it would at any rate have been easy for her to meet him; but with a stubborn purpose, which she did not herself understand, she kept herself apart, and when she met him on the stairs, which she would do occasionally when she returned from her work, she would hardly stand till she had answered his inquiries after Sophy. But at the end of the month, one evening he came up and knocked at her door.

"I am sorry to intrude, Miss Lucy."

"It is no intrusion, Mr. Hall. I wish I had a place to ask you to sit down in."

"I have come to bring another trifle for Miss Sophy."

"Pray do not do it. I cannot send it her. She ought not to take it. I am sure you know that she ought not to take it."

"I know nothing of the kind. If I know anything, it is that the strong should help the weak, and the healthy the sick. Why should she not take it from me as well as from you?"

It was necessary that Lucy should think a little before she could answer this; but, when she had thought, her answer was ready.

"We are both girls."

"Is there anything which ought to confine kindness to this or the other sex? If you were knocked down in the street, would you let no one but a woman pick you up?"

"It is not the same. I know you understand it, Mr. Hall. I am sure you do."

Then he also paused to think what he would say, for he was conscious that he did "understand it." For a young woman to accept money from a man seemed to imply that some return of favors would be due. But, he said to himself, that feeling came from what was low, and not from what was noble in the world. "You ought to lift yourself above all that," he said at last. "Yes; you ought. You are very good, but you would be better if you would do so. You say that I understand, and I think that you, too, understand." This again was said in that voice which seemed to scold, and again her eyes became full of tears. Then he was softer on a sudden. "Good night, Miss Lucy. You will shake hands with me;—will you not?"

She put her hand in his, being perfectly conscious at the moment that it was the first time that she had ever done so. What a mighty hand it seemed to be as it held hers for a moment!

"I will put the sovereign on the table," he said, again leaving the room, and giving her no option as to its acceptance.

But she made up her mind at once that she would not be the means of sending his money to Sophy Wilson. She was sure that she would take nothing from him for her own relief, and therefore sure that neither ought Sophy to do so—at any rate, unless there had been more between them than either of them had told to her. But Sophy must judge for herself. She sent, therefore, the sovereign back to Hall, with a little note, as follows:

"DEAR MR. HALL:

"Sophy's address is at 'Mrs. Pike's, 19 Paradise Row, Fairlight, near Hastings.' You can do as you like as to writing to her. I am obliged to send back the money which you have so very

generously left for her, because I do not think she ought to accept it. If she were quite in want, it might be different, but we have still five shillings a day between us. If a young woman were starving, perhaps it ought to be the same as though she were being run over in the street; but it is not like that. In my next letter I shall tell Sophy all about it.

"Yours truly, LUCY GRAHAM."

The following evening, when she came home, he was standing at the house door evidently waiting for her. She had never seen him loitering in that way before, and she was sure that he was there in order that he might speak to her.

"I thought I would let you know that I got the sovereign safely," he said. "I am so sorry that you should have returned it."

"I am sure that I was right, Mr. Hall."

"There are cases in which it is very hard to say what is right and what is wrong. Some things seem right because people have been wrong so long. To give and take among friends ought to be right."

"We can only do what we think right," she said, as she passed in through the passage up-stairs.

She felt sure from what had passed that he had not sent the money to Sophy. But why not? Sophy had said that he was bashful. Was he so far bashful that he did not dare himself to send the money to the girl he loved, though he had no scruple as to giving it to her through another person? And, as for bashfulness, it seemed to her that the man spoke out his mind clearly enough. He could scold her, she thought, without any difficulty, for it still seemed that his voice and manner were rough to her. He was never rough to Sophy; but then she had heard so often that love will alter a man amazingly!

Then she wrote her letter to Sophy, and explained as well as she could the whole affair. She was quite sure that Sophy would regret the loss of the money. Sophy, she knew, would have accepted it without scruple. People, she said to herself, will be different. But she endeavored to make her friend understand that she, with her feelings, could not be the medium of sending on presents of which she disapproved. "I have given him your address," she said. "and he can suit himself as to writing to you." In this letter she enclosed a money order for the contribution made to Sophy's comfort out of her own wages.

Sophy's answer, which came in a day or two, very much surprised her. "As to Mr. Hall's money," she began, "as things stand at present, perhaps it is as well that you didn't take it." As Lucy had expected that grievous fault would be found with her, this was comfortable. But it was after that, that the real news came. Sophy was a great deal better; that was also good tidings; but she did not want to leave Hastings just at present. Indeed, she thought that she did not want to leave it at all. A very gentleman-like young man, who was just going to be taken into partnership in a hair-dressing establishment, had proposed to her, and she had accepted him. Then there were two wishes expressed—the first was that Lucy would go on a little longer with her kind generosity, and the second—that Mr. Hall would not feel it very much.

As regarded the first wish, Lucy resolved that she would go on at least for the present. Sophy was still on sick leave from the office, and, even though she might be engaged to a hair-dresser, was still to be regarded as an invalid. But as to Mr. Hall, she thought that she could do nothing. She could not even tell him—at any rate till that marriage at Hastings was quite a settled thing. But she thought that Mr. Hall's future happiness would not be lessened by the event. Though she had taught herself to love Sophy, she had been unable not to think that her friend was not a fitting wife for such a man. But in telling herself that he would have an escape, she put it to herself as though the fault lay chiefly in him. "He is so stern and so hard that he would have crushed her, and she never would have understood his justness and honesty." In her letter of congratulation, which was very kind, she said not a word of Abraham Hall, but she promised to go on with her own contribution till things were a little more settled. [TO BE CONTINUED.]

A Wonderful Electrical Storm in California.

An unprecedented electric and sand storm has visited this portion of the country, entirely prostrating the wires of the S. P. R. R. at and around this place. The storm was of over three hours duration, lasting from eleven A.M. until two P.M., during which time lamps had to be lighted, it being

impossible to distinguish the outlines of a box car six feet away. The air during the storm was so thickly impregnated with electricity that one received a slight shock on merely grasping hands. There was great commotion among the instruments. On the approach of the storm, which could be heard several miles away, we cut-out the instruments and disconnected the office connections leading from the main lines, but that proved a failure as regards the obstructing the electricity, as the minute the storm struck, the cut-outs emitted a crackling sound, followed by sheets of flame three inches in length from the cut-out points. Some of these jumped from the cut-out to the instruments, a space of over seven feet, and partially fused the instruments. On going into the freight house, the roof was discovered to be on fire in several different places, caused by the wire being in contact with it, and finding it impossible to quench the fire or to touch the wires to remedy the evil, we were forced to sever the lines from both ends of the building, or sacrifice it.

During the fire many ludicrous and amusing incidents occurred, one of which I append. After the line had been severed a young English blood who had arrived on train No. 21, observing the severed end hanging down, and sparks and flames issuing therefrom, stepped briskly up and grasped the end to see how it felt. After turning three or four somersaults, standing on his head, swinging his "helmet hat," and doing other sundry damage to himself, he was understood, to remark, that it was "dooced 'ot, you know." Many shocks were received by unsuspicious individuals who did not understand the "shocking" business, so that the air became somewhat blue from the imprecations of those who accidentally received an "encore on electricity" while engaged in fighting the fire. To illustrate the quantity of electricity that encircled us, I would state that an iron truck standing in the freight house was so heavily charged as to severely shock several who attempted to seize hold of it. It was altogether a glorious sight to witness the war of the elements, but the poetry of the thing vanished when I received a first-class shock, and got my eyes full of sand. OCCASIONAL.

TULARE, CAL., JAN. 18.

What Q. Cumbers Knows About Woman's Love.

I am sure that the last issue of THE OPERATOR will be highly prized by most of its readers on account of Helen's brilliant article on "Woman's Love," a theme which possesses so much mystery to a large number of our sex that any elucidation from the ladies is always gratefully received. To the undersigned woman's love has always been a conundrum—an intricate mixture of perplexing extremes to attempt to unravel which appeared too much like flying in the face of Providence. Still, with all my lamentable ignorance on the subject, and with the most profound deference for Helen, I cannot bring myself to agree with her in every particular. I am inclined to think that she looks at it altogether from the ladies' standpoint, and therefore doesn't take what politicians call a fair and impartial view of the matter.

For instance, she tells us, in her charming way, that she sees nothing dreadful in a young lady making telegraphing a stepping stone to matrimony. For my part, I think that such a proceeding is, to say the very least, open to criticism. A young lady with such an idea as that commits fearful havoc on a wire, and furnishes enough misery for a Chinese comedy. By some unerring instinct she singles out a susceptible operator, and artfully making it appear all his own doing, beguiles him into conversation, and swindles him into staying after hours to waft all sorts of sentimental nonsense over the wires, thus wasting the valuable time which might be more profitably employed in playing billiards or draw poker, or some other equally exhilarating accomplishment.

She is usually just learning to read by sound, and makes him write slowly, thus giving every plug a chance to hear and profit by his conversation, and that they do hear and profit by it he is soon convinced by becoming the recipient of such "stiffs" as only a plug can give. Then, it invariably happens that some fiend in human shape ground-wires him, and continues the conversation under false pretences, and when he realizes the things that that fellow is capable of saying, he forgets the teachings of his youth and the precepts of his parents, and gives vent to his feelings in language of the most expressive character. In a few days he learns that a rival operator possesses her photograph, and that

she goes skating with a druggist's clerk. Then the demon of jealousy takes possession of his soul, and drives him to drink and desperation.

But it is in her picture of married life that Helen comes down with the utmost severity on suffering mankind. In describing the honeymoon, she says that the husband is full of promises and protestations of undying affection, but I think it will be conceded that in this particular the lady also commits herself. I admit, that when they come to face the stern realities of life, the husband doesn't in every case fulfil his promises, though I think as a general rule that the wife is equally forgetful. For example, he comes home at noon from a harassing morning's work, discussing the political situation in jaw breaking polysyllables, and finds the house in a state of wild confusion from house cleaning, his wife with a towel round her head, her sleeves rolled up, and his dinner of cold liver and onions served up on a flour barrel. When he meekly expostulates, she sarcastically inquires if he expected a picnic, and informs him that if he doesn't like it he can go without, till, half crazed by her galling insinuations, he rushes frantically to a restaurant, and orders dinner in such a manner that the solemn-visaged waiter has to look twice to satisfy himself that it is not a gorilla.

Of course, a reconciliation takes place immediately on his return, promises are elaborately renewed on both sides, and their lives glide on as smoothly and tranquilly as ever.

I might say that my views of married life having been accumulated during a somewhat checkered sojourn among boarding houses and other such precarious points of observation, may not be so sound as those who have had wider experience; but I am perfectly convinced that the social convulsions which disturb the hymeneal bliss are not always inaugurated by the husband. I have no doubt that your Canadian readers all join me in hoping for Helen's speedy recovery, and that we shall often have the pleasure of seeing her contributions in THE OPERATOR. Q. CUMBERS.

Other Opinions on the Same Subject.

We have received a very large number of letters in reference to those Pithy Remarks of Helen's, published in the last issue of THE OPERATOR. That our readers may see what are the views of others on the delicate and interesting subject, we present herewith, in a condensed form, the cream of several of the communications received, which will give a very good idea of what the several writers have to say on the question of woman's love, and kindred matters. The first opinion, it may be well to add, is by a gentleman; all the others by ladies.

The remarks by "Helen," in the issue of January 15th, are, to my notion, the best I have ever read upon that subject, and show a good, clear head. She undoubtedly has studied her subject well, and I fail to notice anything out of place in the whole subject. Can't you give us more of this? I'm single handed, or, in other words, "I'm left," but live in hopes. W. T. S.

I decidedly agree with Helen that if a girl could get a good, devoted husband she should take him, but I think when a girl makes marriage her sole aim and object, she is too apt to take the first who may offer himself, not waiting to be inquisitive and discerning regarding any little faults he may have. If I have read aright the character of Sophy Wilson, marriage was her only ambition, and in consequence she became unhappy in her profession, irritable in her temper, and, I suppose, envious of more fortunate ones around her. Will she hesitate, then, to marry a man she does not love? I think not. She will marry for a home, and take her chances afterward. The Scotch lassie, in an old ballad, says:

"I dinna care what I should want,
If I could get but a man."

and I think her sayings may be applied to Mr. Trollope's heroine, or any girl of like narrow mind. In my opinion, even girls should have two aims in life. one to fit herself properly for performing the duties of a devoted wife and mother, the other to render herself independent of the world. Then, in any case, she is secure. If called upon to assume the responsibilities of a wife, she may enter upon her sphere with confidence and pleasure; or if, in the vicissitudes of life, she is thrown homeless upon the world, she can raise her head proudly and use the fingers

and the brains God has given her. I think that one of the greatest causes of unhappy marriages arises from the union of education on the one side, and ignorance on the other. A man finds that he has nothing in common with his wife, that they have no kindred tastes; or she finds that he cannot understand or take pleasure in her pursuits, that his uneducated mind cannot sympathize with her's, and so their lives insensibly drift apart, and a long, loveless life, or welcome death, speedily follows. L. D.

I think that there are very few lady operators who regard their business as a mere stepping-stone to a husband. It would certainly be very unbecoming in any one to admit that she looked at it in that light. I acknowledge that there are such females in the world, and I presume some in our profession, whose chief aim seems to be to get married, and "talk, move, and smile" with a design upon the male portion of creation." They dress showily, superficially, and oftentimes immodestly, but I do not think that they should be taken as a fair sample of the rest of their sex. They should rather be pitied for having become so unwomanly. No woman is to blame for exchanging seventy-five cents per day for a "dear, good, devoted husband to love and cherish her," if she properly wins the love of such a man. But "dear, good, devoted husbands" do not grow on every bush. Woman's true sphere is in a home of her own with her family, but every woman cannot attain it, and it is better for her to remain single than to be neglected after marriage. Women are not the choosers, but should be chosen, and I think it very unbecoming and unwomanly in any lady to say that she "set her cap" or "was after" any particular man. Helen's address to married men is very nice, and expresses my views exactly. But I would add a word to wives too. My sex are not all perfect. I admit that. I would say to wives: Do not neglect the many little attentions a man prizes so much. Study his interest and his pleasures, and strive to please in the little affair of every-day life, and with him endeavor also to avoid anything likely to lead to a quarrel. I think true love will be willing to make a great many sacrifices on both sides, but I fear that there is not an abundance of true love in this world, and my faith in this respect is small as regards the male portion. M. N. J.

What a fearfully dark picture of married life Helen draws in last OPERATOR! If such is a true picture, give me seventy-five cents a day and independence, and Helen may have the "dear, good, devoted (?) husband." I'll have none of him. That there are some cases such as that described by Helen, I don't doubt, but that they are general I have too much respect for humanity at large for a moment to believe. Helen gives some excellent advice to gentlemen, and ladies reading the same should remember "it's a poor rule that won't work both ways." It is impossible in this work-a-day world to always wear a smiling face, and no one ought to expect it. There are trials and troubles of various kinds to be met and overcome every day of life, and if a couple are truly mated, they will prove a mutual help to each other. Take life as it is, and you will find a great deal more of prose than poetry in it. If Helen took a person like Sophy Wilson for her heroine, you would not be surprised that "every little instance of coldness or neglect is magnified, until in her imagination she believes herself" to be the most abused woman in the whole world, and usually people with so vivid an imagination can worry themselves into a consumption through sheer lack of moral stamina. Imagine, if you can, Lucy Graham fretting herself into a decline, because her husband don't kiss her good-bye in the morning, and comes home with a cloud on his brow at eve! You can't do it, and why? Simply because a woman with the strength of character Lucy possesses will never lose the respect of her husband. Let girls learn to be more self-reliant, fit themselves to be true, noble women, and whatever their lot in life, they will have the satisfaction of knowing that they have not made shipwreck of their own happiness at least. A girl of this stamp will not be likely to accept a man who is unworthy of her. E. A. H.

Mrs. Whiting tells us in her interesting book, "Sights and Insights," that, at one time "Emery Ann" was, together with some person of her party, viewing some Old World statuary, when a woman near her, evidently thinking it was "the thing to do," made some very extravagant exclamations of praise which sounded exceedingly silly to the sensible maiden lady, who ejaculated, "I wish there was a man here to say 'the Devil!'" At the time I read the story I do not think I realized just how Emery

Ann felt, but after perusing the opening chapter of Mr. Trollope's story I think the same desire that prompted this speech of her's took possession of me, and Emery Ann may be sure that at least one person in the world has known how inconvenient it is at times to be a girl. I am well aware that there are some girls who look upon marriage as the chief end and aim of existence, but they are not all "telegraph girls;" for women who intend to get married, the first chance they get, do not usually spend months learning a trade whereby they can support themselves decently, and in many cases lay by something for the future, if sickness should overtake them. I think the fact that so many are doing this work, who are no longer girls, proves that my supposition is correct. Do you suppose that in all the years these nearly always bright, intelligent, and in many cases fine looking girls or women have been in offices, there has been no chances for them to get married? I suppose no such thing. I could name a lady operator who I know has received three offers of marriage. Two of them were made by wealthy men, whom almost any girl could have learned to love, if she cared to do so. I doubt not there are hundreds like her, who prefer their independence and what money they can earn to a husband and a home of his providing. Most girls who are old enough to be in a telegraph office cannot be entirely ignorant of what the generality of married men are like. I do not wish to have it understood that I think them especially bad, or many of them even as bad as Helen paints them; but I cannot see what there is so attractive about them that a girl should be in any hurry to sacrifice independence, and a great many privileges she enjoys, which as a wife she cannot have, for the sake of a husband. It isn't probable that these girls think there are going to be a new kind of men manufactured for their especial benefit. I think all right-minded people must despise the petty manoeuvring Mr. Trollope makes his Sophy go through with to win Abraham Hall, and note such attempts, by whoever made, as weak, unwomanly and contemptuous. I hope that Helen is now quite recovered, and able to give this subject more careful thought than she has evidently done heretofore. L. A. C.

A Lady's Interpretation of a Telegram.

A good story, which, although it may not be strictly true, is at least too good to lose, comes all the way from India. A young sub-lieutenant left his regiment a short time ago on sick leave, and put up at the best hotel, not a hundred miles from Poonah, where he was immediately smitten by the attractions of a lovely young maiden who was staying there. He proposed, was accepted, and the happy day fixed. The colonel, however, disapproved of sub-lieutenants getting married, and particularly of the marriage of the sub in question. As he happened to be a friend of the young man's father, he thought to prevent the union of the fond couple by sending a peremptory telegram couched in the following words: "Join at once."

The son of Mars was in despair. He presented himself before his intended with the fatal missive in his hand, and anything but a look of pleasure in his countenance; but the lady was equal to the occasion. With a blush of maiden simplicity and virgin innocence she cast her eyes on the ground and remarked—

"Dear me! I'm glad your colonel approves of the match; but what a hurry he is in! I don't think I can get ready so soon; but I'll do my best, because, of course, the commands of your colonel must be obeyed."

The young warrior was puzzled.

"Don't you see, my dear," he said, "that this confounded telegram puts a stopper on our plans? You don't seem to understand the telegram. He says peremptorily, 'Join at once.'"

The lady's blushes redoubled, but with a look of arch simplicity, she raised her lovely eyes to her fiancé, and replied:

"It is you, my darling, who don't seem to understand it. Your colonel says plainly, 'Join at once,' by which he of course means get married immediately. What else can he possibly mean?"

A look of intelligence replaced the air of bewilderment in the young hero's classic features, and bestowing a hearty kiss on the rosy lips, he accepted the explanation, and was enabled to answer the colonel's telegram in forty-eight hours afterward in these words:

"Your orders are obeyed. We were joined at once."

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

February 1st, 1878.

WESTERN UNION stock is quoted at 77 asked, and A. & P. at 29 asked.

CYRUS W. FIELD, of Atlantic Cable fame, is President of the new Elevated Railroad Company in this city.

THE Western Electric Manufacturing Company in a two column new advertisement in this issue announces a great reduction in the price of nickel-plated relays, sounders, keys, etc. The Western Electric instruments are too well and favorably known to American telegraphers to need any commendation from us.

It is rumored in Chicago that A. & P. General Superintendent C. A. Tinker is to supersede Col. J. J. S. Wilson as Superintendent of the Western Union at that point. Mr. Tinker accompanied Mr. Orton and Anson Stager on their recent Pacific Coast trip. Rumor does not say what disposition is to be made of the Colonel, and after all the report may turn out to be unfounded.

THE Presidents of the New York and Brooklyn Board of Police are agitating the question of telegraphic communication between their respective headquarters. They believe that the benefit to be derived from such communication would more than counterbalance the expense. The subject has frequently been broached, but the departments of the two cities have been unable to agree upon the subject of the division of expense.

READERS OF THE OPERATOR should bear in mind that we are always happy to purchase for them anything that they may desire from New York, whether in the line of telegraphic or electrical goods or otherwise. Any telegraphic instrument or apparatus advertised in these columns, or manufactured in this country, will be sent on receipt of very lowest manufacturers' prices. Books, newspapers, or magazines on any subject published in New York, Boston, Philadelphia and Chicago, will be sent prepaid by mail on receipt of publisher's prices.

Mr. Orton, who has lately returned from California, whither he had been to arrange some important and delicate business for the company, in which he was quite successful, last week gave a reporter of the *World* a long account of the drought on the Pacific Slope. Mr. Orton also said that his company had great interest already in the far West, and they would increase with the growing prosperity of that part of the country. People generally had no idea how closely connected the telegraph was with the fate of trade and commerce. The telegraph constantly had its hand on the pulse of trade and commerce, so to speak, and it could always be trusted to indicate the condition of the business of the country.

THE NEW TELEGRAPH COMPANY.

The officers of the Continental Company are busily engaged in completing the minor details as to their new lines, and transacting such business as presents itself to a new company getting ready for business. A long and important meeting of the directors of the Company was held January 29th, lasting late into the night. The meeting was again resumed January 30th., lasting all day. We were unable to learn any particulars as to this meeting in time for the present issue, but hope to be able to say something on the subject in our next number.

The Company's capital, as we before stated, is fixed at \$10,000,000 in \$25 shares. It is not intended to have these shares dealt in on the Stock Exchange or to issue them except at the par value of \$25 each. Twenty per cent. of the amount of the shares taken is to be paid at the time of subscribing, and four twenty per cent instalments thereafter as called for by the treasurer of the company.

Attached to each share are fifty coupons of the value of fifty cents each. Five of these are to be redeemed each year in telegraphic service, the company accepting them as equivalent to fifty cents for one-tenth the amount of tolls on messages sent over its lines. For instance, a person holding these coupons, in sending a number of messages amounting to five dollars would pay four fifty in cash and one of these coupons, or if the amount were ten dollars, nine dollars in cash and two coupons. It is believed that this arrangement will meet with favor from business men and patrons of the telegraph, who, indeed, it is expected will subscribe for a large share of the stock.

These coupons can be disposed of by stockholders who may not do a telegraphic business with the company to others who desire to use them in settling their bills. This offers the stockholder a yearly dividend on his investment, the paying of which will scarcely be felt by the company, and may even be the means of securing it many customers, while dividends arising from profits will be distributed to the shareholders as in companies not offering coupons.

The Continental Company proposes to simplify the auditing of messages by issuing stamps and having the amount of tolls attached in this manner to each message. This, it is believed, will do away with considerable clerical labor, and be a great saving to the company. Customers, moreover, can purchase these stamps in quantities, and attach them to the message themselves when they know the tariff, just as merchants keep postage stamps on hand, and stamp their letters before they leave their office.

Another new feature which this company proposes to inaugurate is to show on the delivered copy the precise time at which the message was filed. This would certainly be a great improvement over the present system in a multitude of ways. In the first place, it would be a great satisfaction to the receiver of the telegram to know just when it was filed by his correspondent, and it would often save the reputation of the telegraph, for who has not met the man who rushes breathless into the office in the gathering twilight and tells you to "rush that right through; it should have been sent this morning, but I forgot all about it." The gentleman who expects the message, of course has been abusing the operator at the other end for

several hours as he is "positive that the message was sent early in the forenoon." And even when it does come, the poor operator has no means of satisfying him that his correspondent, and not the telegraph, was at fault.

In Great Britain [the time at which a message is filed is sent by means of a combination of two, or at most three "code letters." Omitting J, the letters of the alphabet up to M are taken to represent the hours, and then the same letters again represent each intermediate five minutes, while the letters R S W X are made to do duty for the minutes between each five.

Thus the code time for 1:15 is A C, 4.35 D G, 9.34 I F X, and so on. It will be seen, therefore, that the transmission of these letters does not occupy much time, and the translating of them for the copy to be delivered is readily done, as all the operators soon become perfectly familiar with them.

Stamps are also used in England in the same manner as the Continental Company propose to use them. The Post Office in that country, as the reader is aware, also owns the telegraph lines. When a message is handed in over the counter, postage stamps to the amount of the tolls are affixed to it and canceled. The messages at the end of the day are then collected together and mailed to headquarters to be audited. This calls for scarcely any clerical labor in the way of reports, error sheets, and the like, and seems to work very satisfactorily over there. An obstacle to the introduction of the system in this country would be that the messages could not very well be first forwarded to headquarters every day. In the first place, one often wants to refer to a message sent some days or weeks before, and then again the expense of mailing or expressing the business of each day would be considerable. But, of course, these minor details could be easily overcome, and the system might possibly be found to work well.

So many opposition telegraph companies have commenced business in this country under what seemed favorable auspices, and yet none of them having succeeded in even maintaining their independence, one naturally feels disposed to receive with extreme caution the opinions of those connected with a new enterprise of this nature as to the glorious possibilities there are of making such a company as theirs a power in the land, and their stockholders millionaires. Yet it seems to us that if the Continental Company only carries out its promises, and is able to secure the aid of capitalists who do not purchase its shares for stock-jobbing purposes, there is a very promising field open to it at this time, and we see no good reason why it should not succeed.

Making Hay While the Sun Shines.

The Western Union having the public at present completely at its mercy, thinks that the best thing it can do is to make hay while the sun shines by increasing its rates. An advance of about twenty per cent. to the principal points west took place January 18th. The rates for ten words from New York to Chicago and Cincinnati were increased from 50 to 60 cents; to St. Louis and Milwaukee, from 60 to 75 cents; to Omaha, from 75 cents to \$1; to Pittsburg, from 35 to 40 cents; to all towns in Missouri other than St. Louis, \$1, and the same rate to all places in Iowa.

On the announcement of the above increase in

rates on the Stock Exchange, Western Union stock advanced from 76½ to 77. A further advance of ¼ in Western Union, and ½ in Atlantic and Pacific occurred on the following Monday, 22d, as the result of an additional notice of advanced rates for messages to various points in New England.

It may be good policy to increase the rates just now, but we certainly don't think so. Already a new company is in the field, and surely the public cannot be blamed for patronizing it when they find that the old corporation no sooner absorbs its plucky rival, the Atlantic and Pacific, than it advances the rates to the very highest point that it believes the public will submit to. Of course, the Western Union expects to be able to absorb the Continental, too, as soon as it develops into a rival worthy serious notice, but then these absorptions, even if they can always be accomplished, are at best very expensive luxuries. The Western Union, it seems to us, has gone about as far in that respect as it ought to. It is already overburdened with leases of rival organizations, upon which it is compelled to pay in some cases more perhaps than ought to be paid, and to pay it, moreover, before it can give any dividends to its own stockholders.

The Western Union is not consistent. Some time ago its official organ said, with tears in its eyes, that unless the then rivalry with the Atlantic and Pacific ceased, the present salaries of its employes could not be maintained, but that if the Western Union only had the entire telegraphic business of the country in its hands, how it would astonish its operators with princely salaries. Now, we regret to say, it completely controls the telegraphic business, but where, oh where, are those princely salaries? Rates are steadily and persistently advanced in all directions, but not a word about increasing or re-instating salaries—not one. Will the official organ please explain why, if in the generosity of its heart the Western Union should find it necessary to reduce its employes' salaries when it had unusual rivalry to contend against, and was making but little money, it should not, on the same principle, increase those salaries now that it has no rivalry or opposition, and is making so much more money than formerly? It is a poor rule that does not work both ways.

The Gold and Stock Life Insurance Association.

In our last issue the organization of the above association, on the 9th of January, was briefly mentioned. The plan of insurance that is here offered is such that a complete system may be perfected wherever fifty or more persons are employed together, the amount of the policy being payable in semi-monthly instalments which are continued to the beneficiary for one year after the death of a member. According to the By-laws as adopted, the membership is limited to a hundred and twenty-five, and the assessments in case of a death are fifty cents per month upon each of the remaining members—twenty-five cents on the 15th, and twenty-five cents on the last day of the month—for one year succeeding the date of such death. The cost of insurance will be about the same proportionably, as in the ordinary benefit associations. The membership being small and the association compact, the expenses are, however, reduced to the minimum. Many of the members of the Gold and Stock Association are

also insured in the Telegraphers' Mutual Benefit Association, but desire to obtain larger policies, while others prefer the new system of paying the benefit in instalments, rather than in one large sum, which may be injudiciously invested, or unwisely spent. No provision has been made for a reserve fund, although many were in favor of it. It was thought best to defer any discussion of that feature until the experience of another year should demonstrate the permanency of the Association. The following officers were elected to serve one year: M. Breslin, President; M. W. Doran, Vice President; C. S. H. Small, Secretary; Ralph W. Pope, Treasurer. Executive Committee: George B. Scott, George L. Wiley, Robert Carter. Over eighty applications have already been received for membership, on which basis a monthly payment of forty dollars would be continued for one year to the heirs of a deceased member.

The Constitution and By-Laws of the Association have been printed, and we presume copies will be forwarded to those desiring to become members, or to organize a similar association in their own city. The secretary's address is Gold and Stock Telegraph Company, Western Union Building, New York.

The Vocal Union Concert at Chickering Hall.

The Vocal Union of New York, composed of lady and gentleman members of the leading choirs of this city and Brooklyn, and of which General Lloyd Aspinwall is President, and Mr. George K. Walcott, of "197" Treasurer, gave their first concert at Chickering Hall, on Thursday evening, January 17, to a large and fashionable audience. The Union has for its principal object the interpretation of glees, madrigals and part songs, to be sung without accompaniment, and therefore demanding the greatest possible delicacy in their performance. Miss Emma C. Thursby was the soloist, and the concert was a great success. Through the kindness of Mr. Walcott many ladies and gentlemen of the main office enjoyed a rare musical evening, prominent among whom, present on the occasion, were Mr. and Mrs. D. R. Downer, Mr. and Mrs. D. W. McAneny, Mr. and Mrs. Walter P. Phillips, Amos F. Learned and family, J. J. Calahan and family, Thomas Miler and wife, Miss F. L. Daily and escort, Miss Jennie Langhlin and friends, Miss Constance Cadiz, Miss Salisbury and party, Mr. Ollman and family, J. H. Dwight, Wm. Orton, Jr., J. B. Page, Messrs. Calvert, Kearney, Kelly, Knittle, and others.

Answers to Correspondents.

SUBSCRIBER. — Procure a piece of soft iron about half an inch in diameter, and six inches long. Bend it into the shape of the letter U, and wind each leg to the depth of about half an inch with copper wire, about No. 20, covered with silk or cotton. Reverse the direction in winding one leg. This will make an electro-magnet that will probably answer your purpose.

NEW ZEALAND. — American lines are troubled very little by "weather contacts" except in stormy weather. An apparatus such as you describe, if simple, would be valuable. There is nothing of the kind in use here at present.

THE Elevated railroad which is being built along the Bowery and up Third Avenue will necessitate the taking down of the Western Union telegraph poles on these thoroughfares.

Themes for the Thoughtful.

Passion is the drunkenness of the mind.

Haste trips up its own heels, fetters and stops itself.

Pride is as loud a beggar as want, and a great deal more saucy.

Ingratitude calls forth reproaches as gratitude brings fresh kindness.

Women being extreme in all points, are generally either better or worse than men.

The chains of habit are generally too small to be felt till they are too strong to be broken.

Happiness can be built on virtue alone, and must of necessity have truth for its foundation.

When men grow virtuous in their old age, they are merely making a sacrifice to God of the devil's leavings.

The virtue of a man ought to be measured, not by his extraordinary exertions, but by his every day conduct.

He who has no taste for order will be often wrong in his judgment, and seldom considerate or conscientious in his actions.

It is difficult, sometimes, to say who do you the most mischief—enemies with the worst intentions, or friends with the best.

Mortality is the result of the laws of motion, and age is death's friendly preparative. All die who have lived; all have not lived who die.

The way to conquer men is by their passions; catch but the ruling foible of their hearts, and all their boasted virtues shrink before you.

The most painful part of our bodily pain is that which is bodiless or immaterial—namely, our impatience, and the delusion that will last forever.

Time sheds a softness on remote objects or events, as local distance imparts to the landscape a smoothness and mellowness which disappear on a nearer approach.

There is one single fact which one may oppose to all the wit and argument of infidelity—namely, that no man ever repented of being a Christian on his death-bed.

Truth comes to us from the past as gold is washed down the mountains of Sierra Nevada, in minute but precious particles, and intermixed with infinite alloy, the debris of the centuries.

We must calculate not on the weather, nor on fortune, but upon God and ourselves. He may fail us in the gratification of our wishes, but never in the encounter with our exigencies.

Haste turns usually upon a matter of ten minutes too late, and may be avoided by a habit like that of Lord Nelson, to which he ascribed his success in life of being ten minutes too early.

A flatterer is said to be a beast that bitheth smiling. But it is hard to know them from friends, they are so obsequious and full of protection; for as a wolf resembles a dog, so doth a flatterer a friend.

She certainly is no true woman for whom every man may not find it in his heart to have a certain gracious and holy and honorable love; she is not a woman who returns no love, and asks no protection.

The greatest loss of time is delay and expectation which depends upon the future. We let go the present which we have in our power, and look forward to that which depends upon chance—and so relinquish a certainty for an uncertainty.

We say love is blind, and the figure of Cupid is drawn with a bandage around his eyes. Blind, yes, because he does not see what he does not like; but the sharpest sighted hunter in the universe is Love, for finding what he seeks and only that.

Every great writer is a writer of history, let him write on almost what subject he may. He carries with him, for thousands of years, a portion of his times; and, indeed, if only his own effigy were there, it would be greatly more than a fragment of his country.

Such are the vicissitudes of the world, through all its parts, that day and night, labor and rest, hurry and retirement, endear each other. Such are the changes that keep the mind in action; we desire, we pursue, we obtain, we are satiated; we desire something else, and begin a new pursuit.

The New York Wire Club.

These light leaves at thy feet I lay—
Poor common thoughts on common things,
Which time is shaking, day by day,
Like feathers from his wings.

Miles O'Reilly occupied the chair at the head of the table. He said that this gathering of old friends reminded him of a similar one some twenty years ago, when he was a headless boy, and which was upon the occasion of his departure from the parental roof. Although many friends had been raised up to him here, he should never cease to cherish sweet memories of the old homestead. (Murmurs of admiration.) We are here, he continued, for a purpose which must call up mingled feelings of joy and melancholy. "Tears would smile, and smiles weep." (A voice, hear, hear.) We grieve to lose our guest, (Mr. Wiley) for so long a period, but every cloud has a silver lining, for had not the fact of Mr. Wiley's involuntary vacation been the primary cause of this notable gathering, this "feast of reason and flow of soul" "across the walnuts and the wine?" (Loud and long continued applause) Matt. Hickey followed Mr. O'Reilly, complimenting that gentleman upon his effort, and in an incredibly short space of time referring to the Silver bill, Excise law, Western Union time ball, Hicks-Lord marriage, and other timely topics, until the chair rapped gently with his knife upon a plate, and called for the guest of the evening. Nicholas Wiley was received with enthusiastic manifestations of delight. He spoke as follows: "Gentlemen of the fraternity: it is with combined feelings of pain and pleasure that I announce to you that for several months to come my voice will cease to be heard at your festive board. It pains me that I have no substitute to offer during my absence, but I take pleasure in announcing that my most ardent desires are about to be realized. I intend to travel abroad and visit many foreign lands. The manager, as most of you know, has kindly granted me a vacation, and the unexpected indulgence quite amuses me. Excuse these tears. Farewell." (Universal expressions of regret.) Oscar Kraft, who resembles ex-president Grant in his reticence, expressed his regret at the early departure of their guest, and congratulated the Club upon their improved surroundings. (Applause.) Samuel B. Lambdin spoke in subdued tones. It afforded him great pleasure, he said, to express in a public manner the high esteem in which he held Nick Wiley, a gentleman who had contributed so much to relieve the dull routine of business at the office, and whose stories would take rank with those of Baron Munchausen. (Great applause.) Mr. Lambdin then announced his intention of remaining at his post in the operating room, reports to the contrary notwithstanding. (Applause.) Mechanical Engineer Bob Morris wished to impress upon the members that the charm of his personal presence was oft-times conferred upon them at the expense of science. (Applause.) Jerry Borst and Supt. Weller sang "The Wearing of the Green," and the meeting then adjourned.

Dancing the New Year In.

And eyes looked love to eyes that spake again,
And all went merry as the marriage bell. BYRON.

The operators of the Morris and Essex Division of the Delaware, Lackawanna, and Western Railroad Company met at the Warren House, Hackettstown, N. J., on New Year's Eve, and enjoyed another of those pleasant and profitable re-unions for which they have now become famous. The dancing began at nine o'clock, and but for a "bad break" about half past ten, when the "line" of march was taken up to the supper room, the "electric current," if it is to be judged by the unceasing trip of the light fantastic, was unbroken until "five o'clock in the morning." Mr. S. S. Bogart, Jr., of 197 Broadway, New York, was chosen master of ceremonies. Mr. Ricker read a resolution of thanks to Superintendent Reasoner, "expressive of the deep sense of appreciation and gratitude for the numerous courtesies extended in furtherance of the re-union," which was carried unanimously, every operator and his fair companion rising to their feet. General Manager W. F. Coolbaugh, whose enforced absence was a matter of sincere regret to all, sent a graceful letter, in which, speaking of the beneficial results of such reunions as this, he said: "We go home with kinder feelings toward each other. We find in resuming our duties that the wires work better. Instruments that used to 'stick' and were a constant source of annoyance to us, now work like a charm. We can get 'that fellow's' writing now—and a desire on the part of all is plainly observable to help

each other along over the rough places. And a stronger ambition actuates us to further the interests of our company by a faithful and cheerful performance of our respective duties." It was hoped that Superintendent O'Brien could be inveigled into favoring the company with a speech, but he persistently refused to "speak a piece," to please anybody. However, Mr. Bray, of Mr. Reasoner's office, was induced to say a few pleasant words, and Mr. Foley of "P. O." followed in a graceful little speech which was heartily applauded. Almost every city, town, and station along the road was represented, and probably a finer looking set of young gentlemen and ladies will not soon be seen. Among the ladies whose presence graced the occasion, and contributed in no small degree to the evening's entertainment, were Mrs. O'Brien, Mrs. Bray, Mrs. S. S. Bogart, Mrs. J. S. Stewart, Mrs. Van Horne, Miss Bellamy, Miss Glenn, Miss Halstead, Miss Bacon, Miss Apgar, and many others whose bright eyes and rosy cheeks will long be remembered by the happy company, which, after a substantial lunch, bade adieu to Hackettstown, and departed at 5:30 a.m., for their various homes, as the New Year's sun rose brightly and the New Year's bells were ringing far and near.

New Uses of Electricity.

The present has been called the age of steam; there are many indications that the coming age will be distinguished as that of electricity. The telegraphs by land and sea of our day, seem to bear about the same relation to the uses of electricity in a near future, that the early inventions of Newcomen and Watts have to the railways and steamships and manufacturing industries of the present. The pathway of the new agent for promoting the welfare of mankind has been fairly opened; some of the directions of progress are indicated; but the length and breadth of the new developments can scarcely be even imagined. In respect to providing artificial light, the advances made within a very brief period are enormous.

The most surprising thing about the electric light is its cheapness in proportion to the amount of illumination. The figures given by a correspondent of *The London Globe*, who is evidently an expert, seem almost incredible. He says that the cost, including the running of a special steam-engine, with the labor of a stoker, is only tenpence sterling per hour for a light equal to 350 gas burners. Supposing that this light could be subdivided without additional expense, the result would be equal to a supply of ordinary street gas at 11½ cents per thousand feet; less than one-twentieth of what our citizens are now paying for gaslight. If these astonishing figures are at all near the truth, the days of street gas are numbered. With a margin of 1,800 per cent profit to work upon, there should be no trouble in overcoming obstructive details. But even if we brush aside such estimates—which in truth seem visionary—and suppose the cost equal to that of gas, the electric light would be preferable because it is cleanly, cannot vitiate the air, and does away with the dangers of escaping gas. In Paris, wherever that light has been substituted, the rates of insurance are reduced.

The telephone seems to be making greater progress in general favor in England than here. A demand for private lines has been stimulated by it, and there are schemes on foot for laying subterranean wires in great numbers. The prediction has been freely hazarded in English newspapers that a revolution in the methods of telegraphy is at hand. The British Government has arranged for the use of the new instrument in their general telegraph system, and similar measures are contemplated by the German authorities. Experiments have been made with the telephone upon an artificial cable owned by Sir William Thomson. Conversation was readily carried on through what was equivalent to 120 miles of submarine cable. When the equivalent of the whole Atlantic cable was interposed, vocal sounds and songs were still audible, though the flow of conversation was not quite satisfactory. Success attended an effort to talk through a submarine cable sixty miles long between two headlands on the English coast.

The new methods of using electricity must prove of immense service in mining operations. The amount of light in mines can be very greatly increased, and the dangers of fire-damp explosions may be almost wholly avoided. At the same time, the communication with the surface can be much facilitated, if the telephone serves as is hoped, though the constant noise in a working mine may

circumscribe the use of that instrument. But if no other good comes of the telephone, it may do this city a service, if it hastens the employment of underground wires. That such a result is not improbable, may be inferred from a recent observation of Professor Bell, the inventor, on a wire stretched over the housetops in Providence, R. I. He has heard through it the pianoforte practice and singing in one of the houses beneath, and was able to identify the tunes. The next thing may be that the telephone is reporting family conversations from along the route of the wire. Already it has been charged with repeating Morse messages from other wires. If the use of this tell-tale becomes general, there will be no such thing as burying a secret till the wires are put underground.—*N. Y. Tribune*.

The Telegraph Messenger.

There is perhaps no person who sees more of the different phases of human nature than the telegraph messenger. He is hailed at one door with anxious, enthusiastic joy; at another with superstitious dread, and at another with an impatient nervousness which has the effect of making the person to whom the telegram is addressed snatch a leaf from the receipt-book instead of tearing open the envelope of the doubtful message.

The messenger rings the door-bell of Mr. Jones' residence. Mr. Jones attends the call. On seeing the messenger present the telegram, he hurriedly tears off the wrapper and proceeds to read it over and over, and finally asks:

"Is this for me?"

"It seems to be your address."

"Where will the marriage ceremony be performed?"

"I don't know, sir, anything about it, please sign and let me go."

"Oh! it's a telegram! I must tell my wife." And the door abruptly closes in the face of the messenger.

On his route the messenger stops to deliver a dispatch to Mrs. Spilkins. The family are at dinner.

"Bridget, who rang?"

"Misses, it's for you." And Bridget hands her the telegram. A shriek, and she falls backward, her lips faintly murmuring "Telegram!" After sufficiently recovering, she remarks, "I told you, Mr. Spilkins, about the dreadful dream Mrs. Smith had last week."

"Oh! poor Jane, when will the funeral take place?"

"And her poor children, oh, how can I bear it?" "Mr. Spilkins; you wicked man, how do you smile while you read it?"

Mr. Spilkins commences reading aloud—

"Petersburg, December 1st."

"Oh! Mr. Spilkins, don't read it to me—"

He continues, "Dear mother—"

"And did she write it before she died?"

"Dear mother, all well. I and the children will be over on the early train to-morrow."

"Ah! I knew it was no bad news; but I am always so nervous about a telegram." — *Richmond Advertiser*.

A number of interesting experiments have been recently carried out at Metz by a committee of engineer and other officers appointed to investigate the practicability of employing electric light during siege operations, and to suggest any modifications which it may seem expedient to introduce in the apparatus at present in use. According to the *Pall Mall Gazette* of the night of October 20, Forts Frederic Charles and Alvensleben were illuminated by throwing the electric light upon them, when it was found that at a distance of from two or three kilometres not only buildings but also individual men could be plainly made out. On the night of the 27th of October the electric apparatus was arranged on the exercising ground outside the Chambiere gate, and the light directed upon a row of targets. Fire was then opened against these later by a squad of riflemen, and the practice made was nearly as good as that recorded on ordinary occasions when firing by day—a result which was considered exceedingly satisfactory, as a thick mist prevailed at the time, and materially interfered with the action of the light. Altogether, the committee concluded that the electric light may in future be employed with advantage not only in siege operations, but also, during outpost duty and engagements at night. — *Engineer*.

Chicago Notes.

This has been quite a week of gaiety for the telegraphers of this section. First, the monthly meeting of the Chicago Electrical Society, on Thursday evening, which was as successful as were the many preceding ones. The musical feature of the society is becoming very excellent.

To say that the telegrapher's ball was a decided success, poorly expresses the sentiment of those who took part in the enjoyable festivities. Many who came merely to look on, or stay a little while, enjoyed themselves so well that they were compelled to remain until the strains of "Home, Sweet Home," reminded them of the few hours yet remaining in which to rest, preparatory to resuming their labors that morning. The supper was simply splendid, and "mine host" of the Gardner House may well be proud of the spread to which the "Knights of the Key" did such ample justice. The following very flattering notice appears in the *Chicago Inter Ocean*: "The telegraphers are well known all over the United States as a generous and loving brotherhood, with men whose hearts seem to be bound to one another by the wires they so deftly handle. With this strong bond of union between them, it was no wonder that last evening, not only Chicago's telegraphers were represented, but those from New York, Buffalo, St. Louis, Springfield, Joliet, and other places, at this, the fifth of the Chicago Telegraphers' receptions. To say that the evening was pleasantly spent with such harmonious elements, with brothers, sisters, wives, and ladies unattached, to aid, would be needlessly to make an accepted proposition. With Pound's orchestra, lancers, polkas, and waltzes, the flying feet kept pace till the goodly hour of supper came round, with such good appetites on time, and a rare and rich banquet to exercise them—a banquet the gods of Epicurus might have tasted and refused to leave. The guests numbered about three hundred."

Milwaukee Personals.

Owing to an unusually dull state of business, a reduction in the force was made Jan. 1st. Cannon and Smith being the unfortunate ones. Ned Hickey, though only 13 years of age, delights in rushing the boys on Nos. 12 and 14, and succeeds admirably. John Gale, formerly manager of the A and P office, this city, put in three weeks of subbing for Harrigan. He is now working for the Board of Trade Co. Maher is taking night report for the W. U., vice Smith laid off. Harrigan has returned to his post on the quad, after a three weeks' visit to Northfield, Minn. Bob Nicaud, the boy whom everybody knows, is on the W. U. staff once more. Pete Cannon talks of going to the Black Hills. Chief Operator W. H. Kelsey is the best looking man in the office, and it is not flattering him to say that, as a chief, he has few, if any equals. Tom Ramsey was the only representative from Milwaukee at the ball in Chicago, on the 18th. Others would have been present had the "Fates" favored them. Henry Damm is our "Strawberry Blonde" check boy, and an excellent one too. Miss Sner, formerly of Watertown, is now in charge of the office at Stock Yards. Since her debut on the "Pony," the boys have all been obliged to take a back seat. Her equal as an operator is not on that string. The oldest operator in the Milwaukee office is about 37, the youngest 13 years old. The balance range from 19 to 22. The handsomest railroad man in this neighborhood is Batchelor, train dispatcher on the Chicago division of the C. M. & St. P. Railway. Emm. Wright takes second place.

Wisconsin Personals.

It is reported that Jack Langhlin, of Waukesha, is soon to change some young lady's name at that burg. Lou. Long, at Green Bay, is a gent whom Prof. Morse, were he living, would be proud of. Miss Ella Donley, the young lady who presided over the destinies of Fountain Spring House office, at Waukesha, during the summer months, is spending the winter with friends at Palmyra. Dan Bohan succeeds J. M. Bunker, as manager of Prairie du Chien office, the latter having received an appointment in the general office of the C. M. & St. P. Ry., Milwaukee. Dan is one of the oldest men on the road, and ranks A 1 as an operator. Miss Nellie Barber, still holds forth at Middleton. Bross and Parker have received numerous compliments from the Madison press for the splendid manner in which they handled the President's message. There's no better team anywhere. Tom Boyden came all the way from Oakdale last week to see our lady operator. Fred Spoerl, Plymouth; F. S. Jacobs, Atwater; J. A.

Friess, Brandon; Tom Wilcox, New Lisbon; H. A. Hildebrand, Hartford; F. B. Smith, Grafton; Stub Cone, Westboro; E. P. Martin, Dorchester; J. M. Fox, Waukesha; M. B. Farmer, West Bend; Jim Dee, Houghton, Mich., and Walt Bittel, Marquette, are all ornaments to the profession which they so ably represent. Charley Eckel is manager of La Crosse office, and Conant and Sinclair, both good men, assistants.

Telegraphic Facilities with other Countries.

On January 18, there was presented to the appropriate committees of each house a memorial signed by leading firms of New York, Philadelphia, and Boston, who are in no way interested in existing telegraphic cables, asking Congress to secure the utmost facility of telegraphic communication between the United States and the rest of the world, by rejecting all applications for exclusive privileges, and passing a law giving permission to all person and companies, without preference, to land telegraphic cables on the shores of the United States, and through them keep up telegraphic communication between this and other countries. Among the signers to the memorial are Brown Bros. & Co., Drexel, Morgan & Co., E. D. Morgan & Co., August Belmont & Co., H. B. Clafin & Co., Peter Cooper, Governors Rice and Gaston, of Boston, and many others.

The German Name for the Telephone.

In Germany they call the telephone "Farnsprecher," signifying far speaker. The adoption of so short a name, says the *Scientific American*, is a matter of congratulation, because the Germans might easily have found a way of smothering the telephone under some frightfully polysyllabic title. To show how closely the fortunate instrument has escaped this fate, a correspondent in Heidelberg writes that no less than fifty-four names were proposed in Germany, all of varying degrees and atrocity. Some (we will not inflict the reader with the original titles) signified "mile tongue," "kilometer tongue," "speaking post," "word lightning," "world trumpet," and finally one inventor, collecting all his energies for a grand effort, triumphantly produced "doppelstahl-blechzungen-sprecher." The jaw can be replaced by pressing on the lower molars with the fingers, and guiding the muscles with the thumbs.

How Married Love Evaporates.

We do not know whether the *Graphic* man has been reading Helen's pithy remarks in last issue of THE OPERATOR, but here's what he says:

First week—Dear, dear, dearest Mary.
Second week—Dear, dear Mary.
Third week—Dear Mary.
Fourth week—Mary.
Fifth week—Mary, you are mistaken.
Sixth week—Mary, that is silly talk.
Seventh week—O, woman, you talk like a fool.
Eighth week—I want the buttons sewed on my shirt cuffs, by—
Ninth week—What! cold meat for dinner? Don't you know a good beef-steak from a bad one?
Tenth week—You're a fool!
Eleventh week—Separation. Mary goes home to her father.

Dashes Here and There.

Heinrich Damm Rahmkorff, of induction coil fame, died December 20th, aged 76 years.

A bill has been introduced into the Assembly, at Albany, by Mr. Astor, which prohibits the use of wooden telegraph poles in the cities of this State, and requires that they shall be of iron or some other metal to be approved by the city authorities.

London *Truth* gives the following contributions to the great question of the telephone. A telegraphic wire runs for a short distance four feet above the network of telegraphic wires along the Midland Railroad. The instrument used on the top wire is a Morse sounder, and the telephonic operator, accustomed to the Morse system, reads off the message passing over the Morse wires. It would appear, also, it says, that any conductor will serve for the telephone, instead of wire. The other day a gentleman applied the telephone apparatus to his park palings. He talked round the park.

The telephone, though but recently practically developed, is not by any means a new invention or discovery. Two hundred and ten years ago a book was published in England, in which the author af-

firmed that "it was not impossible to hear a whisper at a furlong's distance, it having been already done," and that he assured the reader that he had, "by the help of a distended wire, propagated sound to a very considerable distance."

How to MAKE A CHEAP TELEPHONE.—Prof. Barrett, in a recent lecture on the telephone, in England, gave a receipt for making a cheap one. Take a wooden tooth-powder box, and make a hole about the size of a silver half dollar in the lid and bottom. Take a disc of tinned iron, such as can be had from a preserved meat tin, and place in on the outside of the bottom of the box, and fix the cover on the other side of it. Then take a small bar magnet, place on one end a small cotton or silk reel, and around the reel wind some iron wire, leaving the ends loose. Fix one end of the magnet near, as near as possible without touching, to the disc, and then one part of the telephone is complete. A similar arrangement is needed for the other end. The two are connected by the wire, and with this, Prof. Barrett says he has been able to converse at a distance of one hundred yards.

Echoes from 197.

There are three hundred and thirteen Morse keys in use in the main office.

* Roscoe Sprague, who has been ill for many weeks past, is again on duty.

Mr. Lambdin desires us to state that there has been no talk whatever of his taking charge of an elevator at 197. He says it is all a joke.

At the fifth anniversary dinner of the Mercantile Jobbers' Association at the Sinclair House, Walter P. Phillips was among the invited guests, and responded to the toast given in honor of the press.

In answer to a correspondent we would say, that the Miss Snow who now has charge of Haverhill, Mass., office, is the same lady that had charge of the City Line Department at 197 Broadway during the month of February, 1875.

Sergeant W. S. Jewell, of the United States Signal Service, has been transferred from New York to Washington, much to the regret of the Western Union operators here. He is a fine fellow, and they all wish him every manner of success.

PERSONALS.

John M. Graham is with the Western Union at Shreveport, La.

J. M. Quigley, recently of the Atlantic and Pacific, Chicago, has migrated southward.

Louis Klotz, Tom Stewart, and Dyer are numbered among the best of the W. U. "stars" in Mobile.

Charley Graig—"a very handsome little fellow"—assists Jos. L. Sears in managing Pioche, Nev. W. U. Office.

Johnnie Keegan, once upon a time the "susher" at Culpepper, C. H., Va., is with the W. U. at Montgomery, Ala.

Ed. Altemus has resigned his position in the Atlantic and Pacific office, Chicago, and gone to Little Rock, Arkansas.

Geo. H. Kurd, formerly of Chicago, and a strictly first-class artist, is taking report for the Western Union at Houston, Tex.

Mr. Ury C. Palmer, formerly manager Atlantic and Pacific, at Palisade, Nevada, is at present Micawbering at Eureka, Nev.

Paul Bossart, Jack McDermott, Al. Haight, Charlie Cottrell, and Charlie Smith are among the New Orleans Western Union force.

Mr. J. B. Venable, late of Buffalo, but at present in Pennsylvania, waiting for something to turn up, makes a very handsome copy.

C. O. Heenan has resigned the management of the Austin, Nev., W. U. Office, and leased a wire which he expects to make pay.

Harry Coltart is day operator at Holly Springs, Miss. J. Dexter James, late of the Pan Handle, at Ridgeville, Ind., is working nights at the same office.

Mr. J. Thomas Osborne, formerly assistant, Atlantic and Pacific Office, Pioche, Nev., is at present employed as clerk in Wells Fargo & Co.'s office at that place.

Mr. G. E. Miller, late of Pioche, Nev., has accepted the management of the Western Union office at Austin, Nev., one of the handsomest offices in that section of country.

Silas Whittaker, (Etemiller's "Centennial Al.") is night chief in Western Union, Galveston, Tex., office. Frank D. Squires, an old Washington boy, is among the force in that city.

Walter Marsden, formerly manager of E. and P. and Atlantic and Pacific Telegraph Office, Eureka, Nev., is at present assisting Mr. W. Spinner, manager Western Union, at that place.

Mr. N. Poston has resigned his position at Braidwood, Ill.—at which place, by the way, are quite a number of excellent operators—and is now with the Chicago and Alton road at McLean, Ill.

M. G. Chipman, who worked "split trick" Chicago Atlantic and Pacific, has been relieved on account of the reduction of force, and is now anxiously awaiting the advent of the Continental.

Mr. W. H. Johnson, a well known telegrapher aged thirty-one years, died at Minneapolis, Minn., three weeks ago. He was for three years operator in the St. P. and P. R. R. depot office at that point.

S. G. Ramsay, night manager Atlantic and Pacific, Chicago, has been ill for a couple of weeks, but is now happily recovering, and the boys expect to see his genial countenance at the office in a few days.

The offices of the Western Union and Atlantic and Pacific Companies were consolidated at Pioche, January 1st. Jos. L. Sears, an old timer, formerly the Western Union manager, taking charge of the joint lines.

In behalf of the family of A. C. Bennett, deceased, Mr. Charley E. Stagg, of Elmira, N. Y., desires to express sincere thanks to those who, by their prompt and hearty co-operation, crowned his labor of love with success.

F. W. Clark, manager of the Chester, N. Y., office, who was arrested on the charge of arson, has been honorably acquitted by the jury before which he was tried, and the boys along the line are much pleased thereat.

At a late church fair in Tomah, Wis., an elegant silver water set was awarded by a large majority to Mr. C. H. Warren, superintendent of the Wis. Valley R. R., as being the most popular man in the place. There were three other candidates.

524 messages were sent, and 387 received, on the Parker's Oil City, quad during the first five hours of business, Saturday, January 19th. Messrs. Coulton and Drake were the sender and receiver at Oil City, and Brigham and Talcott at Parker's.

A correspondent in Nevada, writes: **THE OPERATOR** is a great blessing to us out here who are so isolated from the rest of the profession. It keeps us thoroughly posted at all times of the whereabouts of our operator friends, and telegraphic doings generally.

Thomas V. Hagen, operator B. and O. Shops, Wheeling, W. Va., died in that city last week, of typhoid fever, in his seventeenth year. Although young, deceased was well and favorably known, and leaves many friends to regret his sudden demise.

Mr. Haden Gentry, Jr., of the Atlantic and Pacific, Baltimore, says he did not get a "writ of ejectment" Dec. 1st, as stated by a correspondent in last issue of **THE OPERATOR**. He thinks it is quite time enough to preach the funeral sermon when the corpse comes.

Mr. Walter Davis, formerly manager Atlantic and Pacific, at Battle Mountain, Nev., has charge of the joint offices at that place for the Western Union. Mr. G. E. Thompson, formerly W. U. manager, owns a store, and was not much chilled by being left out in the cold.

The Galveston News says that Mr. Holloway, train despatcher of the Galveston and Houston Road, has learned, by answering an advertisement inquiring for the heirs of Moses Hamilton, formerly of New Jersey, his grandfather, that he owns an interest in the Central Park of New York, besides money in that city and London. Mr. Holloway starts in a few days to sell out his interest in the park, which he is told is worth thousands of dollars per foot.

It is reported that the New Orleans operators are cultivating long nails on their little fingers, with a view of utilizing them as pens, the economical policy of the W. U. in that city not permitting a supply of the steel articles. If this plan is carried into effect, it will result in a great saving to the company, but it does not meet with very great favor with the boys. We understand the limit of pens to clerks in that office is three per month. New Orleans will soon have to yield the palm of superiority in penmanship if this rule is adhered to.

Mr. R. C. Bennett, formerly telegraph operator at Waverley, N. Y., who died Friday morning, after a lingering illness of six months, was buried from his home at Canisteo, N. Y., Sunday afternoon, January 26th. A large number of his fellow operators attended the last sad rites, and the usual resolutions of sympathy and respect were adopted. Bennett was a quiet unassuming young man, of exemplary character, and had many friends. A very handsome sum was contributed by his brother operators from different parts of the States, which added materially to the comfort of his last days. Deceased leaves a wife and three children.

Walter Dennett goes from Shreveport, La., to Vicksburg, Miss., to fill the vacancy occasioned by the resignation of "Captain Jack" Linney, in the W. U. office there. "Captain Jack" made his name in the political history of Mississippi as the commander of the Vicksburg "Modocs," whose operations during the negro troubles at Clinton, Miss., were the subject of so much "bloody-shirt" waving by the Boutwell Investigating Committee, some two years ago. The "Captain" is "a man among men" in the local politics of Vicksburg, and leaves the telegraphic business to accept political emolument. He is as fine an operator, and as mild a mannered man as one would wish to meet, but a dead shot, and uncommonly quick to resent an injury.

A message was sent by a wag one night recently to Mr. Heiss, night operator T. P. & W. R. R., Eureka, Ill., signed Anson Stager, and asking if he, Mr. Heiss, would accept the position of manager Chicago City office, salary four thousand. He replied in the affirmative, and said he would write Mr. Stager by mail. Next night came another message, signed Anson Stager, asking an immediate answer, which elicited the following: "To Anson Stager, General Supt. at Chicago. Dear sir: yes, sir. Please hold it. Have written you, 10 collect." This answer, of course, did not reach Chicago, but it is understood that the letter did. Mr. Heiss says that some one has been telling Mr. Stager that he, Heiss, never worked the New York Press wire in St. Louis, and that that explains why the appointment was not made.

BRADFORD, PA.—The Western Union office has recently been moved to the new building, 49 Main Street. Mr. E. McDowell is manager, and E. W. Venable and J. L. Barrett, assistants. E. Blakeney takes night report. Messrs. Horatio Barber and Eugene Allan are telegraphing for the Erie R. R. Co. at this place. At Kendall Creek, a branch of Bradford office, the business is attended to by James Wooster, a prince of good fellows. A new office has been opened at Gilmore City, Newton Barnes having it in charge, and at Degolia, with C. McCarthy as manager. Sawyer City has also been favored: with an office, under the management of M. McGee. And Dilk City follows with J. T. Ayres, formerly of the Atlantic and Pacific, Elmira, N. Y., as operator. These places, as well as the offices, are all new, and grew out of the wonderful development of the petroleum business. Tip McCloskey is still at Kinzua, running that office, and speculating in oil territory. BRIG.

BIRTHS.

January 13, to Mr. C. E. Perrin, manager Western Union Office, Eaton Rapids, Mich., a daughter.

January 12, 1878, to Oliver S. McMullin, of the Western Union office, Bedford, Pa., a daughter. First edition.

MARRIAGES.

SANDERSON—RILEY.—January 15, at the residence of the bride's parents, Mr. F. H. Sanderson, of the Western Union night force, Elizabethtown, Ky., to Miss Cora N. Riley.

TOWNSEND—DUNLAP.—January 2, at the residence of J. C. Fulton, Esq., Rockport, Texas, Mrt. C. E. Townsend, manager W. U. office, at that place, to Miss Emma Dunlap, daughter of the late Judge W. W. Dunlap, Arkansas County, Texas.

WEST—DURBRIDGE.—On New Year's Day, at the residence of Mr. J. Kittredge, the bride's brother-in-law, New Orleans, by the Rev. James Beattie, Mr. William Dean West, of the Western Union Telegraph Office to Miss Marcadavilla F. Durbridge, of New Orleans. No cards.

BISHOP—JOHNSTON.—January 9, at the residence of the bride's parents, Mr. and Mrs. Lancelot Johnston, Montgomery, Ala., by the Rev. A. S. Andrews, Robert T. Bishop, of the Western Union Telegraph Office, to Miss Minnie Johnston, of Montgomery.

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The OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

VOL. IX.

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No. 4

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THE OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY

February 15th, 1878.

Volume IX.

Whole No. 96.

That Pesky Error-Sheet.

WARRANTED MACHINE MADE.

Yes, here it is complete,
That pesky error-sheet
For August, eighteen hundred and seventy-seven,
Oh, 'tis sweet the consolation,
In our hours of meditation,
That we'll have no error-sheets in heaven.

This pesky error-sheet,
With its figures plain and neat,
wondrously concise and explicit,
But I really cannot see
How J. Van Every
Makes out such a horrid large deficit.

In August, I remember,
Altho' it's now December,
How I worked on my books and my papers,
With very zealous care,
That no errors should be there,
To cause us to swear at their capers.

First upon the list
Is A—, who doth insist
That he checks me even five and twenty,
But with this I can't agree,
On my books 'tis plain to see
The figures should be only four and seventy.

Then at it we must go,
Through the mails which are so slow,
And with postage stamp bills found fault with,
To discover if we can,
Which of us is the man
Or which office that fifty cents defaulteth.

Now, A—, you must well know,
You should check me so and so,
If not, send me copies all in full,
But with the rules conform,
Acknowledge quick the corn,
Or throw the fifty cents in the pool

A— very soon replies,
In a way which seemeth wise,
That a message to John Jones went collect,
Repeated hence at B,
Who with that doth well agree
But it came to me as paid you can bet.

Then the Co., R. and D.,
A third among three,
Have to chip in to make up the loss,
Which assists the monopoly,
To buy up the A. and P.,
And to feather up the nest of the boss.

The Telegraph Girl.

A STORY OF THE ENGLISH POSTAL TELEGRAPHS.

BY ANTHONY TROLLOPE.

In the meantime Lucy was very poor. Even brown dresses won't wear forever, let them be ever so brown, and in the first flurry of sending Sophy off to Hastings—with that decent apparel which had perhaps been the means of winning the hairdresser's heart—she had got somewhat into debt with her landlady. This she was gradually paying off, even on her reduced wages, but the effort closely pinched her. Day by day, in spite of all her efforts with her needle, she became sensible of a deterioration in her outward appearance which was painful to her at the office, and which made her most careful to avoid any meeting with Abraham Hall. Her boots were very bad, and she had now for some time given up even the pretence of gloves as she went backward and forward to the office. But perhaps it was her hat that was most vexatious. The brown straw hat which had lasted her all the summer and autumn could hardly be induced to keep its shape now when November was come.

One day, about three o'clock in the afternoon, Abraham Hall went to the Post-office, and, having inquired among the messengers, made his way up to the telegraph department at the top of the building. There he asked for Miss Graham, and was told by the doorkeeper that the young ladies were not allowed to receive visitors during office hours. He persisted, however, explaining that he had no wish to go into the room, but that it was a matter of importance, and that he was very anxious that Miss Graham should be asked to come out to him. Now it is a rule that the staff of the department who are engaged in sending and receiving messages, the privacy of which may be of vital importance, should be kept during the hours of work as free as possible from communication with the public. It is not that either the girls or the young men would be prone to tell the words which they had been the means of passing on to their destination, but that it might be worth the while of some sinner to offer a great temptation, and that the power of offering it should be lessened as much as possible. Therefore, when Abraham Hall pressed his request the doorkeeper told him that it was quite impossible.

"Do you mean to say that if it were an affair of life and death she could not be called out?" Abraham asked, in that voice which had sometimes seemed to Lucy to be so impressive. "She is not a prisoner!"

"I don't know as to that," replied the man; you would have to see the superintendent, I suppose."

"Then let me see the superintendent." And at last he did succeed in seeing some one whom he so convinced of the importance of his message as to bring Lucy to the door.

"Miss Graham," he said, when they were at the top of the stairs, and so far alone that no one else could hear him, "I want you to come out with me for half an hour."

"I don't think I can. They won't let me." "Yes, they will. I have to say something which I must say now."

"Will not the evening do, Mr. Hall?" "No; I must go out of town by the mail train from Paddington, and it will be too late. Get your hat and come with me for half an hour."

Then remembering her hat, she snatched a glance at her poor stained dress, and looked up at him. He was not dressed in his working clothes, his face and hands were clean, and altogether there was a look about him of well-to-do manly tidiness which added to her feeling of shame.

"If you will go on to the house I will follow you," she said.

"Are you ashamed to walk with me?"

"I am, because—"

He had not understood her at first, but now he saw it all. "Get your hat," he said, "and come with a friend who is really a friend. You must come; you must, indeed." Then she felt herself compelled to obey, and going back she got her hat and followed him down stairs into the street.

"And so Miss Wilson is going to be married," were the first words he said in the street.

"Has she written to you?"

"Yes; she has told me all about it. I am so glad that she should be settled to her liking, out of town. She says that she is nearly well now. I hope that Mr. Brown is a good sort of man, and that he will be kind to her."

It could hardly be possible, Lucy thought, that he should have taken her away from the office merely to talk to her of Sophy's prospects. It was evident that he was strong enough to conceal any chagrin which might have been caused by Sophy's apostasy. Could it, however, be the case that he was going to leave London because his feelings had been too much disturbed to allow of his remaining quiet?

"And so you are going away? Is it for long?" "Well, yes; I suppose it is for always."

Then there came upon her a sense of increased desolation. Was he not her only friend? And then, though she had refused all pecuniary assistance, there had been present to her a feeling that there was near to her a strong human being whom she could trust, and who in any last extremity would be kind to her.

"For always! And you go to-night!"

Then she thought that he had been right to insist on seeing her. It would certainly have been a great blow to her if he had gone without a word of farewell.

"There is a man wanted immediately to look after the engines at a great establishment on the Wye, in the Forest of Dean. They have offered me four pounds a week"—(twenty dollars in gold.)

"Four pounds a week!"

"But I must go at once. It has been talked about for some time, and now it has come all in a clap. I have to be off without a day's notice, almost before I know where I am. As for leaving London, it is just what I like. I love the country."

"Oh, yes," said Lucy, "that will be nice; and about your little boy?"

Could it be that she was to be asked to do something for the child?

It was, then, the case that some particular service was to be demanded from her—something that would show his confidence in her. The very idea of this seemed to add a grace to her life. She would have the child to love. There would be something for her to do. And there must be letters between her and him. It would certainly add a grace to her life. But how odd that he should not take his child with him! He had paused a moment while she thought of all this, and she was aware that he was looking at her. But she did not dare to return his gaze, or even to glance up at his face. And then gradually she felt that she was shivering and trembling. What was it that ailed her—just now when it would be so necessary that she should speak out with some strength? She had eaten nothing since her breakfast when he had come to her, and she was afraid that she would show herself to be weak.

"Will you be his mother?" he said.

What did it mean? How was she to answer him? She knew that his eyes were upon her, but her's were more than ever firmly fixed upon the floor. And she was aware that she ought briskly to have acceded to his request, so as to have shown by her ready alacrity that she had attributed no other meaning to the words than they had been intended to convey; that she had not for a moment been guilty of rash folly. But though it was so imperative upon her to say a word, yet she could not speak. Everything was swimming round her. She was not even sure that she could sit upon her chair.

"Lucy," he said; then she thought she would have fallen; "Lucy, will you be my wife?"

There was no doubt about the word. Her sense of hearing was at any rate not deficient. And there at once came upon her a thorough conviction that all her troubles had been changed for ever and a day into joys and blessings. The word had been spoken from which he certainly would never go back, and which, of course—of course—must be a commandment to her. But yet there was an unfitness about it which disturbed her, and she was still powerless to speak. The remembrance of the meanness of her clothes and poorness of her position came upon her, so that it would be her duty to tell him that she was not fit for him; and yet she could not speak.

"If you will say that you want time to think about it, I shall be contented," he said.

But she did not want a moment to think about it. She could not have confessed to herself that she had learned to love him; oh, so much too dearly, if it were not for this most unexpected, most unthought of, almost impossible revelation. But she did not want a moment to make herself sure that she did love him. Yet she could not speak.

"Will you say that you will think of it for a month?"

Then there came upon her an idea that he was not asking this because he loved her, but in order that he might have a mother whom he could trust for his child. Even that would have been flattering, but that would not have sufficed. Then when she told herself what she was, or rather what she thought herself to be, she felt sure that he could not really love her. Why should such a man as he love such a woman? Then her mouth was opened.

"You cannot want me for myself," she said. "Not for yourself! Then why? I am not the man to seek any girl for her fortune, and you have none."

Then again she was dumbfounded. She could not explain what she meant. She could not say, because I am brown, and because I am plain, and because I have become thin and worn from want, and because my clothes are old and shabby.

"I ask you," he said, "because with all my heart I love you."

It was as though the heavens had been opened to her. That he should speak a word that was not true, was to her impossible. And as it was so, she would not coy her love to him for a moment. If only she could have found words with which to speak to him! She could not even look up at him, but she put out her hand so as to touch him.

"Lucy," he said, "stand up, and come to me."

Then she stood up, and with one little step crept close to his side.

"Lucy, can you love me?"

As he asked the question his arm was pressed round her waist, and as she put up her hand to welcome rather than restrain his embrace, she again felt the strength, the support, and the warmth of his grasp.

[TO BE CONTINUED.]

The Chicago Western Union Management Vigorously Criticised.

In the issue of THE OPERATOR for January 1st, appears the portrait, pedigree, and an account of the electrical career of our assistant manager. The communication is concluded, by his biographer, with the exceedingly confident assertion that Mr. Jones enjoys the enviable reputation of being scientifically, officially, and socially the leading telegrapher of the northwest. By his (the biographer's) minuteness in the narrating of some unimportant details, and by his peculiar relations with his employers, it is very evident that the fame Mr. J. now so placidly wears was not forced upon him. This fact, and the further one that there are in the office very numerous individuals—promoted and unpromoted—who entertain positive doubts as to the justness and genuineness of all the claims put forward, may be sufficient excuse for further discussing Mr. Jones' merits and demerits, relatively with others who appear to have earned laurels as green and eulogies quite as elaborate.

The chief achievement with which it has been attempted to emblazon the name of Mr. Jones, is an improvement consisting in the overcoming of some "kink" in the working of somebody's "quad," on account of which he has assumed to name it the "Jones quad." The christening was probably legitimate enough, as sanctioned by the action of others of greater fame. In the light of his own reputation, by common example, the claims and sensibilities of the original inventor need not have been considered. Admitting due credit to Mr. Jones in the "quad" matter, and that he is one of the finest electricians in the west, has he, with his worthy *confreres*, actually made the "quad" even a tolerable success in the handling of the business on all the wires upon which it has been employed? In regard to its real usefulness, have there not been long and constantly grave doubts in very respectable quarters? Witness, all or the majority of old chiefs, who are best qualified to note and judge of its work. Take, for instance, one of the most important quad systems, that connecting New York with Chicago; figure out from the books of record for the year just gone the time lost in balancing, sympathetic troubles, and troubles of all kinds, including bulls. Note the commonly slow rate of speed caused by "kicks," etc., and followed by breaks that have in their countless myriads made breaking no longer a sign of plugmism, but by a shattered faith in their ears made plugs of the best operators in the country. Note also delays of business taken from the quads and crowded upon poorer wires, singled or duplexed, to round about repeating stations. Count the number of operators necessary to work a quad, as well as their hours of enforced idleness, and their cost. Compare this wonderful quad with the duplex system, and its capabilities for available wires, good, bad, and indifferent, and you, the company, and those concerned, tell us—the incredulous—whether or not the Jones experiment of the last two years has not been a cheat, a delusion, and a snare, and enormously expensive. In other words, has not the quad proved to be inadequate to fulfill its pretensions? and has it not been worked to the detriment of business, while other and better systems were constantly available? Have not, therefore, its managers, or those responsible, laid themselves liable to an accusation of wrong doing to an extent that appears to savor more of selfish attempts to sustain personal ambitions, than that of a conscientious vigilance and concern for the company's and the public's interest? If it be necessary for the company to experiment with any new process with a view to furthering the efficiency of its appliances, would it not be well to place the trials where they will do as little damage as possible? If the writer's views in regard to the quad as stated above be not correct, the number holding a similar opinion is very great, and it might be of interest to telegraphers generally to see the question settled, with facts and figures, published by competent and undoubted authority.

But there are other considerations connected with Mr. Jones wherein the operators of Chicago feel more vitally interested. His ambition is not satisfied in "playing second fiddle." He desires dearly to be the manager absolute. He has already be-

come the prime mover in an arrangement having the co-operation of the district superintendent, that has come within one of seating him. Indeed, the first act in what many are pleased to call a farce has already been played, and the curtains dropped, shutting out Mr. Maynard from any direct appearance or control in the office, while Mr. J. now occupying the stage overlooking the room over which he has full sway stands at the footlights bowing for favor. The late biographical sketch in THE OPERATOR—although perhaps in some respects deserved enough—may be truthfully likened to a bouquet flung from the pit by one who, but for this and other similarly fulsome flatteries of his superiors, would not this day occupy the position he does. It must be admitted that Mr. Jones is a genius in his way, and holding a fair hand, is playing every card to win. The game in which he and Manager Maynard have been the chief players, has been going on since the day of their election. Mr. Maynard, less crafty and far reaching in his calculations than his opponent, invariably seems to get the worst of it. The game of the one has been guarded, studied, and systematic, ever gaining an advantage by the mistakes and general bad playing of the other. In other words, Mr. Maynard, overzealous, has been laboring under a wrong interpretation of his instructed duties in his dealings with his subordinates to an extent leading him continually into outrageous practices, too often beyond all reason, common sense, or justice; while Mr. Jones, less directly responsible, though oftentimes as guilty, has profited, while Mr. Maynard has lost by the situation. Both are sadly lacking in tact and good judgment or anything calculated to render them popular with their subordinates, and the predominating power of either would not be cause for very general gratulation.

The district superintendent has a son of seventeen or eighteen summers, who has, it is said, given signs of unusual intelligence in the solving of electrical problems. Mr. Jones has for a year or two acted as his private tutor, and pushed the young man forward to a degree encouraging to the boy, flattering to the father, and very commendable in Mr. Jones himself. The district superintendent has also long dreamed of, and sometimes intimated aloud, the details of a plan to make Chicago office "the model office of the world," but said plan had not, betimes, met with any decided favor in the minds of managers or chiefs, and therefore had never been put into execution until its originality(?) was given to the ear of Mr. Jones, who, of course, was too cunning to deny its charming feasibility. It consisted in the districting and subdividing of the operating room, placing nearly every other table under the direct supervision of a chief. To be sure, the plan would require altogether between thirty and forty officers, making Chicago office the most officered office on earth, yet business would then be handled promptly, and the "systematic shirk" or the common operator of any grade would do his duty—for being continually watched and guarded, how could he do otherwise? No matter about the expense—it promised much; the theory was nice, and the spectacle would be imposing. The initiative steps were at once taken. It would be well to educate a score or so of operators to the responsible positions in store for them. A "quad class" was the thing. A notice was posted that Mr. Jones would be very happy to initiate the ignorant into the tangled mysteries of the wire. Meetings would be held weekly; all cordially invited to attend. It soon appeared, from causes too sorely felt, that all were not anxious to contribute to Mr. Jones' happiness by attending. The meetings were thinly represented, and in a desultory way, those manifesting most interest being the untutored late arrivals.

An incident: Mr. Jones was reproaching an operator for a lack of interest in the class, remarking as a persuader, that "he (Mr. Jones) was gaining an influence that no operator could afford to ignore." Then came the 1st of Nov., the day set to prove his words. The class, consisting of those who had been regular or irregular attendants, were called individually before the district superintendent, and informed of their appointments to real chiefships, with the customary powers, privileges, and emoluments, and each duly impressed with the weight of his position. Simultaneously a bulletin was placarded with the names and titles of the fortunate. Few escaped. The greatest surprises, perhaps, were among those of the new appointees who had not been in the city above three or four months, and who, in some cases, could not acknowledge to themselves their inability to even set up the simple circuit of a sounder and relay. As an illustration: Just before the beginning of the new order of

things, Mr. Springer, the night manager, was formally requested by Mr. Jones to furnish a list of the four men he would choose to act as new chiefs in the night force. Mr. Springer, twenty-two years in the service, fifteen years in his present position, and a thorough electrician, would presumably be able to judge of those who, by age, experience, and ability were best qualified and suited to his requirements. He made out the list and sent it in. Yet not one of them was accepted! Those forced upon him—worthy though they be—by Mr. Jones, had not been in the office more than six months, and one of them—to show a further inconsistency—the day of this writing, two months after his appointment, has not yet been placed upon the regular roll for regular pay, but is still on the extra list, and, according to rule, his services are liable to be dispensed with at nine or ten o'clock any night. He is an excellent and intelligent gentleman, and of course realizes the ridiculous position in which he has been placed, simply because he had been a brief attendant upon the "quad class" of Mr. Jones, and had purchased from him a copy of Prescott's work on electricity. All this while there were plenty of old and reliable men in the office, well qualified by practical experience to have filled those positions creditably and sensibly.

In recapitulation: The whole arrangement presents to an uninterested observer a varied aspect, about as follows: Day Manager Maynard and Night Manager Springer have become simply figure-heads—managers only in name, for neither is permitted to exercise his will and judgment in the regulation of the operating force of the office, and are only consulted and conferred with as a mere matter of form. They have no active duties to perform—simply allowed to arbitrate trifling and commonplace questions, unimportant to the management as a whole. The old appointed and long experienced chiefs are rendered nearly as useless; for while formerly they had general employment in different parts of the room, they are now most of the time hanging around the switchboard, with little or nothing to do, unless to watch the subdivision chiefs, and consider their reports and complaints. The new appointees are taken, in many cases, with a reckless disregard of their qualifications and terms of service, from regular and useful work at the key, and made to divide their time between taking a way message now and then, and standing guard over half a dozen working operators. In some cases this is done with an ostentation so conspicuous and silly as to be quite in keeping with their vulgar inexperience. While in other cases, it is true, their duties are performed in a way that should be observed as a creditable example to some of their elders. Yet, all considered, the view most clear is, that there are about a score of Chicago office officials who are nearly or totally incapacitated from rendering the Company an adequate service for the salaries they receive. And here come the conclusion that the present real management has not conducted the office affairs in a manner just, wise, or economical. To accuse any one of them of studied duplicity and willful wrong-doing might appear to some uncharitable. Those of such disposition must account for the situation through mutual rivalries and misunderstandings—by ambitions working hastily for selfish ends, with a too careless regard for the remedying of frequently occurring mistakes.

Some hints that may suggest possible improvements and remedies seem in order:

"A house divided against itself cannot stand," or words to that effect. Petty rivalries, audacious scheming, and mutual criminations having become conspicuously noticeable throughout the management, harmony, order, and strict attention to business should be restored even at the expense of some transfers for health and more room.

There are those who believe that, by the curtailment of the "chief squad" of at least half a score, and requiring the remaining fifteen or more to act alive in well trained duties, the office would then be abundantly officered, and the expense account lessened by an item of at least ten thousand dollars a year. The message-boy department of the operating room is badly organized, and should be extended and systematized, so that these daily delays in the handling of messages from wire to wire, or to the delivery department, may be remedied.

A case in point: It had ever been the custom here for the operators to file sent messages in a drawer at their left hand, and to hang received messages on a hook fastened to the center of the partition of the table. Recently an order was issued by Mr. Jones requiring that sent messages be filed upon the "received hook," and received messages stuck upon a sharpened wire spindle placed on the table within

half a foot of the book. Now, this direct reversal of what operators had been doing so long was perplexing, and "force of habit" caused general confusion. An unfortunate thirty-dollar a month man fell into the trap the first day, by hanging a received message where he had been hanging them since a boy. The message was delayed two hours and a half before the mistake was discovered. It happened to be an important one, and the delay made it necessary to 'refund to the sender; so the thirty-dollar man was assessed five dollars tolls, and went with his toes out of his shoes the rest of the month. Mr. J., in justice, should have paid the five dollars himself, as a penalty for issuing such an order, and for permitting the message-boy department to be run in so loose a manner as to make two hours and a half of a delay possible.

The long continued action of a certain night chief in surreptitiously endeavoring to run this office, and the country round, by signing his name to voluminous orders and complaints, and by other questionable conduct, over the head of his manager, is leading him beyond his depth, and will only aggravate already grievous complications.

The unmanly practice of insulting the defenceless, without tangible or tenable cause, should be discontinued, and replaced by the displaying of instincts that, however rigid, shall still command some respect and esteem.

The habit of making frequent promises and agreements only to be broken or denied, is unworthy a proper superintendent, manager, or chief.

Operators are needed, not to graduate for chiefs, but to do the safest, speediest, and most reliable work at the key, for which they should enjoy fair credit and pay, and thus make such positions places of such excellence and honor that every operator shall feel a pride and interest in striving to reach them.

At present, the salaries of this office are in no way an indication of an operator's ability. Some of the worst "plugs," "shirks," and "table sleepers" in the office have long received the highest salaries by ten or fifteen per cent. One was appointed to a chiefship, and another enjoys even more privileges, for, being able to do nothing, he has nothing to do, and no responsibilities. With such a state of affairs, what ambition could any operator be expected to cultivate beyond that of a mere automaton machine.

The Morse system for instantly available work is not likely soon, if ever, to be generally supplanted by any other system, telephonic, or what not, and therefore it will be well for the company to leave nothing undone to keep its talent in its service, and make the whole operating and machinery force so perfectly efficient as to be quite equal to any increasing demands of the public and the times, and at the same time make uncomfortable any enemies in the shape of opposition.

If there must be present a superfluity of chiefs, there is plenty of indigent and low salaried talent that would fill the places cheaply, and quite acceptably.

It is due to the district superintendent to say, that in relation to the varied workings and essential needs of the office, there is good evidence that he has never been kept fully and properly posted by his managers, and, therefore, some missteps through his directions should not always be regarded as moved by bad faith and intention.

It is due Manager Maynard to add that the present arrangement of the office is not by his approval, and that his present relations with those acting above him are due principally to his non-concurrence with them, and against his better convictions in the matter. It is due his assistant (so-called) to remark, Frank-ly:

"He is—but words are wanting to say what; Think what a man should be—he's not quite that," still, he has some talents and a little wit, that, with judicious cultivation, may yet shine resplendent in a more flattering portrait—*Jaber sua fortuna*.

Should any of those mentioned in this letter demand substantiated details of implied or declared offences, they will be forthcoming.

CHICAGO, FEB., 1878.

ARGUS.

We were yesterday presented by Mr. Lou A. Bien of the B. C. R. & N. R'y, with copies of THE OPERATOR, a journal devoted to scientific and practical telegraphy. The paper is filled with the most interesting reading matter, and no telegraph operator should be without it, while those not in the business will find much in it to interest and amuse them. It is a pleasing visitor to us and recalls many recollections of our telegraphic career.—*Cedar Rapids, Iowa, Republican*.

"Oh the Cruel Men!"

In addition to the following, we have received several other able communications on the same subject, particularly one from Albany, N. Y., and one from Jordan, Canada. The matter, however, interesting as it may be, is hardly telegraphic enough to permit us to publish in full the many and conflicting opinions advanced by the different writers.

I have been greatly edified by reading Helen's lecture, "How to become a good husband." If I did not know that such a thing were impossible, I should certainly infer that she had passed through the fiery furnace she describes, given up the ghost, and returned to life again, after a brief repose, to preach reformation. People who experience such things, however, never preach them. It is human to parade our virtues and hide our sorrows, and *vice versa* other people's. But I am not going to lecture Helen. She is a noble girl, only she hits most too hard; not me, of course. I am not married, never was, and don't wish to be. I couldn't think of it now. That picture of Helen's is continually before me. When I meet a young lady now, thoughts like these occur: "How beautiful, how innocent, how happy because she is free." Then the near future flashes before me, and I exclaim: "How delicate, how sorrowful, how consumptive looking." And then the grave opens and closes over her, and a tear drops from my eye as I turn away to avoid her gaze, and I say to myself: "No, I'll live and die as I am before I'll trust myself to care for such a tender flower."

I fear that Helen's practical view of married life will discourage many young men from transforming themselves into Benedicts. But there are two sides to every question, and this one is not an exception. Helen has beautifully and graphically depicted one side as she saw it, therefore she will grant me the privilege to portray the other as I see it.

I grant that Helen's ideas of a husband are the proper ones, but her idea of the way they kill their wives is very far-fetched. Are not the cruel men just as often deceived, as the innocent women? Why is it that so many young men are wifeless, and so many young women husbandless? Simply because young men cannot afford to marry. Why? It is said that the advancement of civilization in a nation can be traced by the treatment of its women. It has reached a very high plane in the United States. "Wife" used to be interpreted "help-meet," now it is "luxury." Here in California it is proverbial that when a man marries he not only marries the lady of his heart, but a chinaman and doctor as well, and, I might add, a milliner and dressmaker besides. Quite a family for a beginning!

I was considerably in the streets of San Francisco one summer and for five months never saw a calico dress. The only way those relics of by gone days and happy hours could be seen here ten years ago was to inaugurate a calico ball. But O my! how wretched the poor women felt, though they tried ever so hard to look happy. However, they are coming into fashion again—I mean the calico dresses, women are always in fashion—but they are almost as expensive as silk. Less than six months ago a lady acquaintance of mine bought the material for a calico dress for one dollar and a half, and paid seven dollars and a half to have the dress made. But O, says Helen that's all the fault of the men. What! going to blame us because you can't do your own sewing?

Again, do not three-fourths of the young ladies look to married life as a stepping-stone from the kitchen to the parlor. I beg pardon—so few of them enter the kitchen now that that comparison is out of place. It is painful to contemplate the disgust that the young girl of to-day entertains for the dining room and kitchen. Now I sincerely believe that this estrangement of the man from the wife, spoken of by Helen, is as much due to her previously wrongly conceived ideas of married life as it is that the husband gradually grows cold and indifferent, cross and cruel. She had thought that married life would be all bliss, that a wife was "a thing of beauty" to be idolized and petted, and have every comfort that her heart could wish, and that she would have no tasks to perform, not even to sew on a button, that she was only to be sweet, loving, and affectionate. There must be a change made in the training of young girls for wives, or the professional class of young men will go unwedded. A young man may live by his wits, and so may a young lady, but when both try to exist on the wits of the one alone, the majority of attempts prove failures. But when they both *work* together, each in his and her proper sphere, they verify the saying: "United we

stand, divided we fall." To work is the allotment of mankind. If a young lady has been properly educated, she will not think it drudgery, while her husband is away toiling for their mutual support, to lighten his burden by doing the housework herself. She will be all the healthier and all the happier for doing so. Such a wife will never die of a broken heart, or seldom have occasion to be displeased with her husband.

SAMSON.

The Trouve Mutiple Telephone.

M. Trouve, a well known French electrician, has lately submitted to the French Academy of Sciences an account of experiments conducted by him upon the Bell telephone, the object being to increase the capabilities of that apparatus and to render it available over any distance, however long. Instead of the single vibrating diaphragm used by Professor Bell, M. Trouve substitutes a cubical chamber, each face of which (with one exception) is a vibrating membrane. Each of these membranes, being thrown into vibration by the same sound, influences a fixed magnet and electric circuit, the same as in the Bell arrangement. By associating all these currents, a combined current of single intensity proportional to the number of magnets influenced is produced. Instead of the cube, a polyhedron having an indefinite number of vibrating membranes may be used, and thus intensity augmented as desired.

Suppose now a line established on which is disposed a telephone constructed as above described, the membranes and magnets of which are divided into two series, and the circuits so arranged that, by pronouncing a word, currents are produced on the same wire in opposite directions. When a dispatch is received to be transmitted further on, the operator talks in the telephone in the usual way; and his speech, by the arrangement of circuits above noted, is heard both at the station to which he is forwarding the message and also at the one from which the message was sent, so that the possibility of error is thus rendered nil. M. Trouve has adapted this apparatus to his military telegraph.

Telephonic Traditions.

The oldest inhabitant is reminded that on the morning of the battle of Bunker Hill the sound of the cannon was plainly heard in more than one settlement on the hills of Berkshire County. In Lee, a man who was digging a well was the first to hear it, and in Pittsfield and Worthington, those who put their ears to the ground received the most distinct impressions. To the truth of these statements various witnesses might have been called to testify, but now, of course, all evidence is second-hand. Then the Springfield Union brings up another interesting case, which it offers the inventor of the telephone for solution. In Lenox, 55 years ago, an Indian was hung for murder. A Pittsfield military company acted as guide, and a Pittsfield physician, at his home, heard that noon the sound of their drum and fife so plainly that he thought them within a few rods, and went to the brow of the hill expecting to see them. He did not see them, for the sufficient reason that they were then six miles distant. Another party, ten miles north of Lenox, heard the slow music played that day, before and after the execution. There are many of these traditions current in New England, and some of them embalmed in history, which have never been explained; but perhaps before the telephone is perfected, we shall have obtained a satisfactory solution of these mysteries.—*Boston Herald*.

An officer of the Prussian army has published in the last number of the *Militär-Wochenblatt* an interesting account of some experiments recently made by him in order to determine to what extent the telephone can be utilized by the outposts of an army. The results of the experiments made by the Prussian officer appear to show that there is nothing to prevent the telephone being used for the purpose referred to. Posts were stationed representing pickets and their sentries, and although the weather was very cold—the thermometer standing at 3 degrees below the freezing point, and a strong wind blowing—conversation was carried on with ease by men three hundred and four hundred yards apart. The only precaution taken was to make the men using the telephone to pull the hoods of their great coats over their head and ears, in order the better to confine the voice of the instrument.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

February 15th, 1878.

WESTERN UNION stock is quoted at 76½ and A. & P. at 22½.

THE Continental Telegraph Company has made a change in regard to the coupons spoken of in our last issue. The latter will be accepted for their face value in full or partial payment of a message, and not for one-fifth the amount of the tolls, as at first proposed. The company does not seem to make as rapid progress as we should like to see. The poles, however, for the Philadelphia line are being put up, and the route has been laid out as far as Milltown, N. J.

It will be remembered that the Western Union had the *quo warranto* suit against it carried from the Philadelphia Common Pleas' Court to the United States District Court, same city. General Collis, at whose instance the *quo warranto* was issued, contends that the Common Pleas had proper jurisdiction, and he made application to Judge Cadwalader to have the matter sent back. Argument upon this point was to have been made February 5th, but owing to the absence of Attorney-General Lear, and by private arrangement with counsel, the case was not called up, and will not be for a week or two.

OUR Washington correspondent offers a timely suggestion in regard to sending a competent commissioner to represent the electrical world at the Paris Exposition. It will also be seen from today's issue that the same subject has engaged the attention of the newly organized Electrical Society of the Ohio Valley at Cincinnati, and that the Society has telegraphed President Hayes, recommending the appointment of Mr. C. H. Haskins, Superintendent of the N. W. Telegraph Company of Milwaukee. We cordially second Mr. Haskins' nomination. In any event, the subject of electricity must not be unrepresented at the coming Exposition.

A LONG and ably-written article in reference to the quad system, and reflecting somewhat severely upon the Chicago Western Union management in general, and Assistant Manager F. W. Jones in particular, will be found in this issue. It may be well to state that before publishing this article we inquired fully into the matter, and unless all the old and most responsible operators in Chicago have entered into a conspiracy to deceive us, the case is not overstated by our correspondent, Argus. There has long been complaint in regard to the manner of conducting the affairs of the Chicago office. But of course we must not condemn the management without an opportunity of stating the other side of the case. We shall, therefore, be pleased to lay before our readers anything that those referred to in the Argus letter may have to say in their own behalf.

TELEPHONIC RIVALRY.

The Bell Telephone Company of New York was organized several months ago for the purpose of introducing Professor Bell's telephone. Completely monopolizing the field, and having an invention which had already won its way to public favor, the company charged and continues to charge the certainly somewhat exorbitant rental of fifty dollars a year for each double pair of telephones, the entire cost of manufacturing which would be but comparatively a few cents for each instrument. Seeing that there was money in the business at such a rental, a number of officers of the Western Union and Gold and Stock Telegraph Companies organized themselves into an opposition, which they called the "American Speaking Telephone Company," and advertised that the Gold and Stock Company was prepared to supply the public with private lines and improved telephones.

The Gold and Stock's telephone is one patented January 8th by Prof. Amos E. Dolbear, of Tufts College, author of "The Telephone," and manufactured and slightly improved by Mr. Phelps, of the Western Union Manufactory. This, it is claimed, is an infringement on the Bell invention, and the original telephone company has issued a notice informing those to whom it may concern that the only speaking telephone protected by United States patents is that of Professor Bell, and that persons infringing the Bell patent are liable to prosecution for damages.

The company says that it intends to proceed against the Gold and Stock as soon as any of the telephones are put up. In the meantime, although orders have been received and private lines built, the Gold and Stock people have not attached any telephones. Whether this is because they are not quite certain that they have a right to use the instrument, or on account of a tardiness in the manufacture of the same, is not quite clear. Considerable interest, however, is felt by electricians and those interested in the telephone to see how the matter will end.

The Dolbear telephone, or, as it is called, on account of Mr. Phelps' improvements, the Phelps duplex telephone, although on the same general principle as the Bell invention, is of a flat, oblong shape and has two diaphragms. It is claimed that the second diaphragm, which is Mr. Phelps' improvement, has the effect of increasing the volume of sound. These telephones, like the Bell apparatus, are not sold, but rented, and at the same rate—fifty dollars a year for a set of telephones and a generator and call bell.

Besides these there is also another telephone in the field—that of Mr. G. B. Richmond, a dentist, of Lansing, Mich. This latter was tested over the line of the Western Union Company between Lansing and Detroit, a distance of 230 miles, last November, as reported at the time in THE OPERATOR, and pronounced in some respects superior to the Bell apparatus. This telephone requires a battery, and 372 cups being attached, "Marching on" and other songs sung in Detroit were distinctly heard at the Lansing end. Mr. Richmond, we understand, is still experimenting with his invention, and expresses himself as confident that with a perfect instrument and the amount of battery used on the above occasion, a perfectly distinct message could be conveyed 1,000 miles.

It would benefit the public much if the rivalry between the Bell Company and the Gold and

Stock would wax so bitter as to bring about a reduction in the rental of the telephones. The present rental is too high, and we question whether Professor Bell would not net a larger profit—certainly he would make as much money as any one man would ever require—by selling the instruments outright at a fair price. Even at twenty-five dollars a pair a very large number could be sold. In Germany, where the telephone is not patented, a pair of instruments can be purchased for six dollars, while in England no less than one hundred and fifty dollars is demanded.

The *Scientific American*, referring to this subject, says that "Patentees and patent proprietors make a mistake in endeavoring to gain larger profits by guarding their devices thus closely. There is more to be gained by allowing them to come into the widest possible usage, and by the exercise of reasonable liberality."

In order to prevent infringement of their patents, the Bell telephone people maintain agents whose duty it is to watch for attempts at private manufacture of the invention over certain districts, and on detecting such to require the unauthorized maker to pay the same rent as if he had regularly hired his instrument. This method of managing a patent is rarely successful. The apparatus may be constructed very easily, and at the cost of only a few cents; it is so much a novelty that hundreds will make it, if only to gratify their curiosity, while others having found uses for it will go on and employ it as freely as they would the telegraph. No system of espionage can take account of all such cases, and therefore it probably would be found much more remunerative if the invention were manufactured and sold at a fair profit.

The telephone company owns even the lines upon which the telephones are used, and rents that also by the year. A line of half a mile equipped with telephones, costs about two hundred dollars a year, the wire and poles being the property of, and kept in repair by, the telephone company.

MR. EDISON has perfected a device by which sewing-machines can be run by the vibrations of a tuning-fork. This is done by resting the curve of the fork about where the foot-pieces of an ordinary sewing-machine are placed, and letting the arms of the fork project up above the table of the machine. Just underneath the table and quite close to either arm of the fork are placed two magnets. A current of electricity is passed through the magnets and the fork is set in vibration, breaking and closing the circuit each time. Just between the arms of the fork is a "racket" wheel, with another grooved wheel on the same axle. From each arm of the fork a "cleat" projects and rests on the wheel—on one side the top of the wheel, on the other underneath—and they are held in place by a small spring. The vibration of the fork is started, the "racket" wheel moved at the same time, and by means of a belt passed over the grooved wheel the machine is run. The invention is said to work perfectly and continuously.

A LOCAL life insurance association, somewhat similar to that recently established by the employes of the Gold and Stock, was organized in this city, February 9th, by the employes of the American District Telegraph Company.

A New Electrical Society.

At a largely attended meeting of electricians and telegraphers of Cincinnati and vicinity, held on the evening of February 9th, in the Western Union Telegraph Company's building in that city, an organization was formed, called "The Electrical Society of the Ohio Valley." Among those present were I. N. Miller, of Chillicothe, Ohio, Superintendent of the Marietta R. R. Telegraph; E. C. Armstrong, Superintendent of Police telegraph, and Messrs. Jones, Gilliland and Ross, electricians of Cincinnati.

The nominating committee presented the names of the following candidates, who were unanimously elected as officers: B. H. Johnson, President; I. N. Miller, first Vice-President; A. T. Gould, second Vice-President; W. I. Capen, Recording and Corresponding Secretary; W. J. Lawler, Treasurer; E. W. Starbird, Librarian. Executive Committee: S. M. Dunlap, J. C. Mattoon, O. K. Newton, William Fellows. The President's name was also added to the above. Directors: E. T. Gilliland, W. C. Ross, E. C. Armstrong.

After perfecting the organization, the following resolution was presented by Mr. O. K. Newton: "Be it resolved that the following be sent by telegraph to President Hayes, as the unanimous sentiment of this Society:

CINCINNATI, O., Feb. 9, 1878.

TO HIS EXCELLENCY, PRESIDENT HAYES,
WASHINGTON, D. C.

At a regular meeting of the Electrical Society of the Ohio Valley, held in this city, this evening, the following resolution was unanimously adopted:

"Whereas, no appointment has yet been made to represent the United States at the Paris Exposition, in the Department of Electrical Science; therefore, be it resolved, that this Society respectfully and earnestly recommends and urges the appointment of Charles H. Haskins, of Milwaukee, as a person of known ability, and one who would ably discharge the duties of the position."

After several short speeches highly eulogistic to Mr. Haskins, the resolution was unanimously adopted.

Fast Sending.

Will you please answer the following through the columns of your paper: What is the fastest time that has been made sending and receiving, and who made it? N. D. W.

N. J. Snyder sent, and W. P. Phillips received 2,731 words in an hour, and if you will refer to Vol. 8, No. 5, of THE OPERATOR, page 8, you will find a report of some exceedingly rapid sending and receiving by operators of the New York and Boston main offices.

Our advertisers have been crowding us considerably with their favors of late, and although this is the chief revenue of THE OPERATOR—the price at which the paper is furnished to subscribers being much less than the bare cost of producing the paper—we have endeavored to keep the advertisements from unduly encroaching upon the reading matter. To-day we are compelled to encroach two columns upon the reading matter, but this will probably not soon occur again.

The Very Latest Use of the Telephone.

The following advertisement appears in the New York Herald "Personal" column of last Sunday:

A chance to be married by the Bell speaking Telephone will be given to a limited number of couples during the latter part of this month. No charges will be made; satisfactory references required. Applicants should address box 229 Herald office.

At the office of the Bell Telephone Company, Tribune Building, we were informed that the matter is hardly developed enough yet to say much about it, but that if a sufficient number of candidates for matrimony by this novel means present themselves, the ceremony will take place with due pomp, and in the presence of many witnesses, some time toward the end of this month. Applicants will be required to give reference, and several applications have already been received. It is believed that many will be anxious to be married in this manner on account of the novelty of the thing, and we presume the telephone Company expects to be repaid in gratuitous advertising.

Clubs for the Operator.

Messrs. H. Y. Bresee, A. E. Chantler, L. T. Pennington, L. A. Bein, H. C. Wineland, C. C. White, H. B. Spencer, H. S. Davis, John V. Windes, C. A. Mitinger, A. H. Ashald, A. D. Brewer, M. D. Yager, J. LePage, A. D. Thompson, C. S. White, have our thanks for favors in the shape of clubs. We are quite sure that there are hundreds more of readers who can secure us a few more subscribers, and we shall thank them very heartily if they will at least make the effort. Specimen copies mailed free. Send for some. The following liberal premiums are offered for clubs:

For 2	Yearly Subscriptions,	One Pack of Visiting Cards and Engraving of Prof. Morse.
3	"	Copy of "Oakum Pickings."
5	"	Copy of THE OPERATOR, 1 year.
6	"	One No. 6 Exercising Tube.
7	"	Copy of "Lightning Flashes."
9	"	"Lightning Flashes" & "Pickings."
12	"	OPERATOR, "Flashes" & "Pickings."
15	"	An A 1 Sounder or Learner's Outfit.
18	"	Goodyear Health Lift Complete.
20	"	Health Lift and copy of "Flashes."
24	"	A Nickel-Plated Relay but little used.
45	"	A Splendid New Nickel-Plated Relay.

TELEGRAPHING WITHOUT WIRES. — Professor Loomis, of Yale College, has recently made some further experiments in the mountainous regions of West Virginia between lofty peaks. For his purposes he used kites, a copper wire being substituted for the usual kite string. The kites were raised to a considerable height, when it was found that signals sent along one wire were transmitted by aerial currents to the second, ten miles distant. It was also discovered that continuous aerial currents exist at this altitude capable of serving the purposes of the telegraph, except when interrupted by violent atmospheric disturbances.

AMONG other places, THE OPERATOR is regularly on sale in this city at the corner of Broadway and Liberty Street, at the corner of Broadway and Fulton, in front of the Western Union Building.

Themes for the Thoughtful.

Whoever is in a hurry shows that the thing he is about is too big for him. Haste and hurry are two different things.

A man who loves to be peevish and paramount and to play the sovereign at every turn, does but, blast the blessings of life, and swagger away his enjoyment.

Sleep, thou repose of all things; sleep, thou gentlest of the deities; thou peace of the mind, from which care flies; who doth soothe the hearts of men wearied with the toils of the day and refit them for labor.

A great thought awakens in our mind a whole world of new perceptions, as a sunbeam streaming into the darkness shows a thousand atoms floating in its path.

Very few people go into an argument in order to discover the truth of the matter. They want to hold their own and rout the enemy. Hence the general loss of temper.

The mind has a certain negative power, which cannot be wholly idle. If it is not laid out and cultivated into a beautiful garden, it will of itself shoot up weeds or flowers of a wild growth.

The happiness of your life depends upon the quality of your thoughts; therefore guard accordingly, and take care that you entertain no notions unsuitable to virtue and reasonable to nature.

Talent in power; tact in skill. Talent makes a man respectable; tact makes him respected. Talent convinces; tact converts. Talent commands; tact is obeyed. Talent is something; tact is everything.

To make anything very terrible, obscurity seems in general to be necessary. When we know the full extent of any danger, when we can accustom our eye to it, a great deal of the apprehension vanishes.

Sing of the nature of women, and the song shall be surely full of variety, old crotchets and most sweet closes. It shall be humorous, grave, fantastical, amorous, melancholy, sprightly, one in all and all in one.

The great moments of life are but moments like the others. Your doom is spoken in a word or two. A single look from the eyes, a mere pressure of the hand, may decide it, or of the lips, though they cannot speak.

The human heart is like a millstone in a mill; when you put wheat under it, it turns and grinds and bruises the wheat into flour; if you put no wheat in it still grinds on, but then it is itself it grinds and slowly wears away.

The condition and characteristic of a vulgar person are that he never looks for either help or harm from himself, but only from externals. The condition and characteristic of a philosopher are that he looks to himself for all help or harm.

Pride is as loud a beggar as want, and a great deal more saucy. When you have bought one fine thing, you must buy ten more, that your appearance may be all of a piece; but it is easier to suppress the first desire than to satisfy all that follow it.

Always say a kind word if you can, if only that it may come in, perhaps, with singular opportuneness, entering some mournful man's darkened room like a beautiful firefly whose happy circumvolutions he cannot but watch, forgetting his many troubles.

Manners are the shadows of virtues; the momentary display of those qualities which our fellow creatures love and respect. If we strive to become, then, what we strive to appear, manners may often be rendered useful guides to the performances of our duties.

Truth is always consistent with itself, and needs nothing to help it out. It is always at hand, and sits upon our lips and is ready to drop out before we are aware; whereas a lie is troublesome, and sets a man's invention upon the rack, and one trick needs a great many more to make it good.

It is resignation and contentment that are best calculated to lead us safely through life. Whoever has not sufficient power to endure privations and even suffering, can never feel that he is armor proof against painful emotions—nay, he must attribute to himself, or at least to the morbid sensitiveness of his nature, every disagreeable feeling he may suffer.

San Francisco Notes.

When it became known that President Orton and Vice President Stager were about to visit this coast, our telegraph world was thrown into a flutter of excitement, it having been rumored for some time previously that the Opposition, the Atlantic and Pacific lines, was to be absorbed by the Western Union Company. On the arrival, early in December, of the above named gentlemen, accompanied by Supt. Dickey, of the Union Pacific, and W. B. Hubbard, Traffic Supt. of the Salt Lake Division, these rumors soon assumed a tangible shape, and it became known that negotiations, having in view the leasing of the lines of the A. & P. Co. for a term of years were in actual progress. These negotiations were completed by about the 15th of Dec., it being understood that the Western Union was to pay in the neighborhood of one hundred thousand dollars per annum for the use of the A. & P. lines in the Pacific division. Having completed the purpose of their visit, our illustrious guests took their departure for home a few days after Christmas. While here they examined carefully into every department of the service, and expressed themselves well pleased with the manner in which each branch was conducted. Pres. Orton remarked that for its size San Francisco office compared favorably with New York in regard to cleanliness, order, discipline, and general facilities for conducting business.

In pursuance of the arrangement above referred to, the dying out of the old year witnessed the dying out of the competing line which, for over seven years, has asserted its right to share in the telegraphic business of the Pacific Slope. On the first of January all the commercial offices of the A. & P. were closed. This step has unavoidably thrown quite a number of operators out of employment, but not so many as was at first anticipated, the W. U. giving employment to the majority of them. The six wires of the A. & P. were run into this office, and five of their operators, old W. U. men, were welcomed back into the fold. Our business for 21 working days this month, as compared with the first 21 working days of December, shows an increase in the total number of messages handled of about ten per cent., and in the number of messages delivered from this office of about 12½ per cent. This, however, may not be considered a fair estimate, as owing to the stormy weather during the past three weeks, and the consequent interruption to lines, our business has probably not been as large as under more favorable circumstances it might have been. Our present force consists of the following: Horace Jones, E. Somerville, J. H. Powers, Jas. O'Toole, L. M. Painter, Frank P. Brown, D. W. Knapp, W. J. Grier, E. F. Reese, Thos. K. Berry, Geo. Campbell, B. F. Kenny, Frank Medina, (the above five from A. & P.) Jas. Urquhart, Jno. F. Leatch, Jno. Donnelly, J. H. Thatcher, Miss S. Peck, Miss R. Thomas, Mrs. M. L. Moss, Miss G. Coles, Miss Belle Nicoll, Flemon Drake, Manager; W. J. Hamilton, chief operator; Chas. Drake, night chief.

Quite a number of changes have recently taken place. C. T. Dozier, formerly manager here, has been appointed chief operator at Sacramento, *vice* Leatch, transferred to this office. W. H. Glover, night chief this office, resigned on February 1st, to accept a position in the Oakland office, and it is understood is shortly to become manager there, *vice* B. R. Bates, who, owing to increasing ill health, is compelled to retire. Charles Drake, brother of our manager, and recently from Salt Lake, succeeds Glover. Thos. George, from this office, and R. E. Kearon, of Oakland, have been transferred to Sacramento, the force of that office being also augmented by the addition of H. F. Pray, from "across the street." A. B. McCoy, the last of the A. & P. men here, returned to his old quarters at Virginia City, where Davy Crawford, who has lately worked for the A. & P. there, also joined him on the "night watch." Frank B. Rae, who came to us from New York, has advanced step by step, from operator to Supt. of Supply Department, and now holds a position for which he is well qualified, that of electrician and traveling agent or inspector. No one envies "Frank," and every one is pleased at his success. J. G. Bloomer, late manager of A. & P., has been appointed superintendent of supplies. "Bif" Cook and Sam DeLong are working at Salt Lake City.

It is in contemplation to remove the repeating office from Virginia City to Reno, and from Salt Lake to Ogden. In this city, the "consolidation" has caused quite a number of city offices to be closed, and several estimable young ladies are bewailing the loss of their pocket money, and retired to private life.

There has been quite an epidemic among the

"boys" during the last month, and no less than three out of six unmarried men were carried off by it. December 26th, D. W. Knapp, who was formerly of Adrian, Mich., started the ball rolling by his marriage to Miss Lizzie A. Thayer, only daughter of B. B. Thayer, an estimable and well-to-do citizen of this place. Next followed Horace Jones, Dec. 29th, to Miss Maggie A. Little, formerly operator at Watsonville. Then a week or two ago, Will Glover, our late amiable night chief, astonished us by the announcement of his marriage to a charming young widow, named Mrs. Emma Brock. He took a quiet trip to San Jose the same day that Knapp did, and there sealed his fate, but has managed to keep it a secret until a few days ago.

All hands unite in wishing the above gentlemen and their fair companions much joy. Her New York friends will doubtless have heard that Miss M. L. Rossman had not been with us long when she changed her name, Sept. 19th, to Mrs. G. A. Moss, a devoted lover having followed her from the metropolis of the Atlantic. She is still with us.

T. Stanley Cunningham has retired from the service, and is an aspirant for municipal preferment, in the shape of a police court clerkship. Stanley is one of the old timers, and we wish him success. He has a small wife and a large family to provide for.

In these days of breaking banks, corruption in office, political stealing, and thieving generally, it is quite refreshing to notice a case of such genuine honesty as recently occurred here. One of our first-class men who, owing to his natural modesty, shall be nameless, had occasion to send away a small sum of money by mail, and went to one of our leading banks, which for obvious reasons would doubtless prefer to be nameless also, paid in his little twelve dollars, and received from the absent-minded clerk a certificate of deposit for twelve thousand dollars. He discovered the mistake shortly after leaving the bank, and at once returned and explained matters. The poor clerk was so taken aback that he had not the presence of mind to thank our honest friend, or even to present him with a \$20 gold piece, or any other little token of his regard, but our "good boy," believing that honesty is the best policy, looks for his reward in the "sweet by-and-by."

Faithfully yours,

"SPRING."

Washington Notes.

The new arrivals here are Kennedy Duff, late manager of the A. and P. branch office at Sixth St. and Pennsylvania Avenue, now closed; and Jno. S. Burrell and C. C. Brown of Richmond, Va. Jim Saffell has been placed in charge of the branch office at the post office, and Major Vowles transferred to the Sixth St. office nights. Johnnie Connor, who has had charge at night has been put on day duty as assistant, the increase of business requiring two operators. Tone Stewart is a happy man. It's a boy. First edition. A new set of duplex instruments has been put up for use on the Baltimore and Washington circuit, business being very lively there. The prevailing question here is: "What is the Continental Telegraph Co. going to do?" There are quite a number of telegraphers in this city out of work and waiting for something to turn up, who are anxious to know about it. Press dispatches are hardly as heavy as last winter, but range from 65,000 to 75,000 words daily. Receipts, however, are larger than they have been for some time past, apparently steadily increasing. Aleck Bauer, night manager at Baltimore, was in the city yesterday. There has been considerable talk about a new office here, but it seems to be "all talk and no cider." The A. and P. branch office at Willard's Hotel has been closed and the office fixtures torn out. Now while Commissioner General McCormick is preparing the list of Commissioners to visit Paris and report upon specific subjects, would it not be well to urge upon him to send some one to report upon electrical progress, who can make a more creditable report than was made at the Vienna Exposition in relation to this subject. Geo. Hamilton, Gerritt Smith, Moses G. Farmer, and a host of others might be named who could and would do the subject justice. Experiments have been made with Edison's telephones here. They seem to be too delicate, and it is almost impossible to work them owing to induction. Between private houses, where they do not come near other wires they would, no doubt, answer the purpose, but the heavy batteries used on duplex and quad circuits are death to telephones. Congress has been unusually quiet this winter on telegraphic questions, but, as a large number of investigations have been ordered, and will soon be in full blast, we may ex-

pect a repetition of the scandalous conduct of the investigating Committees of previous Congresses, in overhauling telegraphic correspondence, if they can reach it.

On dit that a radical change may shortly be expected in the Western Union Board of Directors. Quite a number of the employes have invested in the Louisiana lottery in which the drawing takes place to-morrow, and it is expected that about \$100,000 or thereabouts of the capital prizes will be invested in Western Union stock in the next thirty days. There is no doubt of the capital prizes all coming here. Then there will be a new order of things. High tariffs and short messages. High salaries and short hours. No D. H. privileges, etc. A few of our boys went to Baltimore to attend the telegraphers' ball, which took place February 4th. Several more intended going, but were detained, much to their regret. Those who did go enjoyed themselves hugely, and speak in the highest terms of the kindness and courtesy with which the Baltimore boys received them, and the attention paid them.

Dashes Here and There.

By means of the telephone, music played in France has been distinctly heard in England.

Wherever in Paris the electric light has replaced gaslight, fire insurance companies have reduced their rates.

Prof. Robinson gave an exhibition of the telephone at Portsmouth, N. H., February 7th, which is described as having been "a very interesting and pleasant entertainment."

Ninety per cent. of the Signal Service probabilities were verified last year. 159 stations were maintained during the year.

At Queen Victoria's recent trial of the telephone at Osborne, Miss Kate Field, in London, sang "Kathleen Mavourneen," and her Majesty returned thanks telephonically through the Duke of Connaught.

It is lying awake of nights trying to determine whether to leave your fortune to an orphan asylum or a home for old men, that makes the life of a telegraph operator so wearing.

A telephone has already been placed in the House of Commons to enable the editors of one of the leading London newspapers to hear by word of mouth the latest news of the Parliamentary debates.

As a matter of precaution, and in view of the fact that several years ago an attempt was made to steal the remains of Lincoln, the regents of the Mount Vernon Association have connected Washington's tomb with the mansion by an electric burglar alarm, so that if any attempt were made to enter the tomb at night the guard would hear an immediate warning.

Mr. H. A. Clute, supt. telegraphy L. V. R. D., Mauch Chunk, Pa., has in operation a telephonic line half a mile in length, with seven offices, and, on account of branch circuits, in all five grounds. Mr. Clute is able to carry on conversation with any office on the main or branch circuit irrespective of the grounds, and the branch offices can converse with those on the main circuit with the greatest ease.

Some amusing errors are pointed out in Wilkie Collin's last story, "The Duel in Herne Wood," which are quite as good as the memorable bull of the French novelist, who made one of his characters begin a speech with, "We, men of the Middle Ages." The scene is laid in England in 1817, yet three of the characters speak of taking "express trains," and a fourth, a lawyer's clerk, sends a "telegram" to his principal. There were no passenger railroads in England before 1825, while practical telegraphy only dates from 1844.

LIGHTNING FLASHES is a *melange* of history, poetry, narrative, humor, fun, wit, wisdom, profusely illustrated with broad caricatures of scenes in the life of telegraph operators. The book contains an interesting summary of the leading features in the life of Samuel F. B. Morse, inventor of the electric telegraph, including his earliest efforts, trials, and subsequent success. A specimen of the laughable anecdotes and curious experiences given in "Lightning Flashes" will be found on our first page this week.—Glens Falls, N. Y., Republican.

A young man paid a visit to the operating room of the telegraph office at St. Paul week before last, and curiosity inducing him to fool with one of the cells of battery, his trousers became spattered with the fluid. The operator assumed an expression of

horror and hurriedly informed the young man that if he did not immediately pull off his trousers the fluid would burn through the clothing and into the flesh of his legs. The searcher after telegraphic truths fully convinced that he was in a perilous situation, pulled off his trousers and scudded for home under bare poles.

A young man from Syracuse brought a couple of telephones and a coil of wire rope to Rome last week, and in the evening he went around to a house where a girl lives, and whistled softly until one of the upper windows was opened, as he expected it would be. Then he threw one of the telephones up in the window and whispered into the other instrument: "Are you there, darling?" Sharp and clear came the answer: "Yes, I'm here, and if you'll wait till I get my boots on, you'll think you have been elected for the next world by 60,000 majority." He had hit the wrong window.

APPLICATION OF ALUMINIUM TO TELEGRAPHY.—The *D. Allgemeine Polytechnische Ztg.* contains an interesting article relative to the applicability of aluminium for the construction of telegraph wires. This metal has twice the conducting power of iron, and is susceptible of being drawn to the thinnest wires. The practical application of this metal to the purpose proposed is only hindered by its great cost, and at present the impossibility of obtaining it in large quantities. In lieu of wires composed entirely of aluminium, it is suggested that iron wires be covered or coated with the metal, thereby increasing its conducting power and reducing the weight of the line. Such wire would be especially adapted for military purposes, for a greater length of wire could be rolled upon a single reel for transportation. —*Polytechnic Review.*

TELEPHONES IN MILITARY OPERATIONS.—The telephone is being rapidly introduced into the various military establishments, not only in the capital and its neighborhood, but also everywhere in Germany. At Dresden one of the new instruments has been arranged between the commandant's office and the arsenal and barracks of the Rifles, about 800 yards distant. An already existing telegraph wire is utilized, from which wires are further led to telephones in four rooms in the barracks. The apparatus is reported to act perfectly, conversations being carried on without the slightest difficulty. In Austria, also, experiments, the result of which is stated to have been exceedingly satisfactory, have been made in Vienna with the telephone, and an important addition has been made to the instrument by an Australian railway official, in the form of a bell, to call attention to messages about to be sent. At the same time it is generally admitted by military men abroad that much has yet to be done before the telephone can be considered available for practical use in the field. It is an extremely delicate apparatus, and any noise either at the sending or receiving end of the wire interferes greatly with, and sometimes altogether prevents, the transmission of messages by it. Time alone will show whether it will be possible to improve it so as to render messages sent by it audible amid the invariably accompanying military operations.

Salt Lake City, Utah, Items.

Salt Lake is a thoroughly first-class office, there being none but first-class men employed, and nothing but first-class work done, consisting almost entirely of the overland business, which amounts to about forty thousand messages a month, in addition to the regular Press, which amounts to, handled twice, about twenty-four thousand words a day. The principal circuits of the office are a polar duplex and one single wire to Chicago, a distance of one thousand five hundred and sixty miles; also, a polar duplex and two single wires to San Francisco, about one thousand miles. There are two single wires East and West, used principally for local and railroad business, and a wire to Helena, Montana, about five hundred and fifty miles. The force here consists of the Brothers Morison, Jack and Aleck, the Burke faction, Mick and Courcay, Mike Conway, C. H. White, E. W. Emery, Bif. Cook, Jim DeLong, Tom Kehoe, W. E. Huey, and Geo. F. Brown. Our working chief is Mr. T. J. Grier, who is universally esteemed. The Deseret Telegraph Co. have recently transferred their wires, four in number, to our office. Their force consists of Mr. Wm. F. Parr, Manager, W. A. C. Bryan, and Ted Taylor, operators. The Deseret have a branch office in what is familiarly known as the "Bee Hive," the general office and residence of the late Brigham Young. This office is presided over by Mr. W. B.

Dougall, superintendent of the line, assisted by Burke Spencer. We are at present having most beautiful weather here, and, I might add, in conclusion, that to-day, February 1st, is the commencement of the Chinese New Year, which is being duly celebrated by the residents of a certain portion of this city, commonly called "Chinatown."

Echoes from 197.

The water elevator man is appropriately named—Fisher.

Four automatic instruments have just been added to the machinery at 197 Broadway.

Percy K. Jones has taken advantage of the lull in business, and is rusticated in the interior of the State.

Fred Wilcox, the efficient and gentlemanly manipulator of No. 8 East, is back at his post, after an illness of ten days.

Jules Guthridge is wafting his first class Morse over 50 East, having changed off for a short time with Charlie Miller.

Miller Bullard, Supt. Mo. & Pac. R. R. Line, Sedalia, Mo., called at 197 recently, and was chaperoned through the office by Charlie Griffin.

Mrs. James H. Lyman, wife of Manager Downer's courteous secretary, visited the operating room last week reaccompanied by some lady friends.

Train dispatcher Holloway, of Galveston, Tex., is in town, looking after some property to which he has lately fallen heir, as reported in our last issue.

It is understood on reliable authority, that Mr. A. A. Smith, of 51 East, is about to visit Connecticut. The hearts of the fair daughters of the Nutmeg State are in imminent peril.

Stanley McNider, of Montreal, an operator who worked for some years in this city, is at present in the Postal Telegraph Service of Guatemala, and has accumulated a fortune of \$100,000.

Quite a breeze has sprung up in Haverhill, Mass., between Miss Snow, of the A. & P., and Mr. D. Hook, of the W. U., as to who shall have charge of the latter office, it having been decided to close the former.

A serious breach has occurred between Mr. Childs, general manager of the Law Telegraph, and Supt. Weller of the same company. The former gentleman refuses to recognize Mr. Weller, and transacts his business through the senior chief here.

W. H. Sawyer, who was formerly assistant night manager of the old American Telegraph Co. at 145 Broadway, called lately to pay his respects to the few old timers here. Mr. S. has accepted a position with Eugene F. Phillips in Providence, R. I.

Two first-class operators who thoroughly understand the quadruplex, are wanted at Virginia City and Sacramento respectively. The salary to be paid is \$108 per month. A large number of applications are in from prominent telegraphers in this office.

PERSONALS.

Old "Con" Dwyer is on the 12 midnight to 8 A. M. trick in the Chicago W. U. office.

Leroy Hutchinson, of the A. & P. Co.'s main office, Chicago, was recently made the happy father of a fine young son and heir.

Charlie Johnson and Miss Glasson, the latter one of the finest looking ladies in the office, work the Chicago end of the St. Louis quad.

Mr. John P. Kerns has resigned his position on the W. U. Chicago quad, and accepted a position as bookkeeper with the Wilmington Coal Company, Chicago.

Mr. Geo. H. Kurd, Press agent for the W. U. at Houston, Tex., has been relieved by Mr. C. A. Clough, of Denison. Mr. Kurd is about to embark in the stock business.

Miss Jennie Medkirk is the manager of the W. U. at Junction City, Kas., and Miss Belle Perry at Salina, Kas. Both are first-class operators, and handle business in good style.

Bob Lord, of Chicago, received 2,100 words of special—dating each hundred word sheet without stopping—in one hour and two minutes, from Frost, at Buffalo, a short time ago.

R. B. Pearson, formerly superintendent P. & A. Telegraph Co., has resigned his position of superintendent American District, and is now on the split trick, W. U., main office, Chicago. The office of superintendent was abolished when Roger quit.

Stephen Chester, a telegraphic instrument maker, of No. 104 Centre Street, was on his way to the Liberty Street Ferry, on the evening of the 9th of January, when a man pushed against him and snatched a gold watch from his pocket. Chester pursued the thief for some distance, but lost sight of him. David Starling was subsequently arrested, and being identified was last week convicted and sentenced to five years in the State Prison.

Andrew Kinkade is night operator of Kensley, Kan. At 4 A. M., five desperadoes with blackened faces entered the depot, and covering him with their revolvers, ordered him to hand over the money. There was \$2,000 in the office, but he showed them an empty cash drawer, and pretended that he had not the key of the safe, thus gaining time till the train rolled up, when he made a dash for liberty and escaped, though he was fired at. The trainmen and robbers exchanged running shots for two miles, when the townspeople, being fairly aroused, turned out *en masse*, and the bold highwaymen had to fly.

Mr. W. B. Vansize has resigned his position as chief operator in Albany, N. Y., A. & P. office, to accept a position as stenographer in the Canadian Parliament at Ottawa, which adds another to the long list of important positions filled from the telegraphic ranks. Mr. Frank Lake, of Syracuse, has been transferred to Albany to fill the vacancy caused by the resignation of Mr. Vansize.

Charles Smith, formerly of Springfield, Ill., has been recently doubly blessed in the possessing of one of Springfield's fairest daughters for his bride, and the appointment of assistant chief sub-division 12, in the Chicago Western Union office, days. Fred Goodrich vacated the position of assistant chief to go into the grocery business with his father-in-law, at Delevan, Wis. Report says he is doing splendidly.

CONCORD RAILROAD.—H. H. Morrison is manager at Concord, with Dan W. Cowdrey and W. D. Booth as operators. Chas. F. West is train dispatcher, Northern R. R., with F. P. Brady and H. B. Dexter as assistants. Miss Nellie C. Rowell, daughter of Supt. of Telegraph, H. N. Rowell, of the Eastern R. R., is receiving clerk at this office. Miss Dennison presides over the destinies of Suncook office. R. A. Lantry holds sway at Hooksett. C. J. Abbott is manager and Arthur Darling operator at Manchester, while Miss Anna Garvin manages the depot branch office. F. E. Nims and Mr. Emerson are at Nashua, with George Wilkins at the depot branch office.

ST. PAUL AND PACIFIC R. R.—Ed. Hughes is manager at St. Paul, he has six day and two night operators. H. V. Dugan is train dispatcher and W. C. Albee assistant. A. Nelson is at machine shops. L. J. Baker at St. Anthony Junction, M. Ulmer, at St. Anthony. L. R. Robertson is manager at Minneapolis, with P. A. Rogers, Morris Towne, Mr. McCarthy, A. E. Chantler, and Ed. Crowell as assistants. H. R. Tennant is at Wayzata, H. B. Rome at Long Lake, C. B. Moody at Maple Plain, C. W. Rickerson at Howard Lake, G. D. Breed at Dassel, C. E. Baldwin at Litchfield, J. D. Marshall at Atwater, R. D. Bloomfield at Wilmar, Ed. Hughes at St. Paul, and P. A. Rogers at Minneapolis are considered the fast men.

BOSTON NOTES.—The American District Telegraph Company of this city has just come under the control of the Western Union, by the purchase of a controlling interest in its stock by the Gold and Stock, which latter company has for some time been under the control of the Western Union. The company is being re-organized, with Mr. Charles P. Wood, Assistant General Superintendent of the Western Union Telegraph Company, as President, and Mr. Suel Smith, formerly manager of the Gold and Stock Company's office in this city, as Superintendent. Under this management it is intended to build up the district lines, and to give as efficient service here as like companies do in other cities. At a musical re-union in South Boston, a short time ago, Mr. J. F. Dowsley, manager Revere House office, contributed to the entertainment of the entertainment, for which he received a very complimentary notice in a local paper. Mr. J. H. Humphrey has again resumed his duties at 109 State Street after a short illness. Mr. Charles G. Waldo, of Oswego, N. Y., is working on the night force at 109 State, changing with Mr. Harry Williamson, who

goes to Oswego for one month. Owing to the inability (?) of certain men on the day force to report promptly at eight A.M., Manager Milliken has bulletined a new regulation which obliges these persons (after being late a requisite number of times) to be assigned to a split trick, reporting for duty at a later hour in the morning, and working a proportionately late hour in the evening.

ST. JOHN, N. B. ITEMS.—The Western Union moved into their new building corner King and Prince William Streets, January 13th. The several departments are arranged as follows: The first floor contains the receiving and delivery departments, which are connected with the operating room by pneumatic tubes. Superintendent Clinch's department occupies the third floor, the operating room the fourth, and the battery room the fifth. The latter contains one thousand Callaud cells, and is reached by elevator from the basement. The operating room is fitted up in a tasteful but inexpensive manner. The switch is of the regulation spring jack pattern, and accommodates twenty wires. The four quartette tables are occupied by three sets of single and one of duplex repeaters, and single instruments; duplex circuits to Montreal and Halifax will soon be arranged. The building is heated by steam, and is a decided improvement on the old office. The present staff consists of Mr. T. M. Robinson, manager, B. S. Black, chief operator, and Messrs. C. B. Dunham, E. B. Caswell, George S. Dodge, J. F. Rankin, W. L. Miller, George Dalton, C. McKee, R. A. Mitchell, A. D. Skinner, and F. Barberie, operators. The Dominion company opened an office here recently. They have offices at all the principal points in New Brunswick and Nova Scotia. F. H. Cleveland, formerly of this office, is now working in the cable office at North Sydney. Mr. C. B. Dunham, of this office, has been ill for nearly three months with typhoid fever, but will soon be able to resume his duties. Dull times and low wages prevail here just now.

OIL CITY ITEMS.—This office now ranks second in the State, which hardly seems credible to the large manufacturing city of Pittsburg of quite ten times the inhabitants. One day, a few weeks ago, we handled between 2,200 and 2,500 messages, about 900 of them on the Parker, Pa., quad, our heaviest wire, and the bulk of the whole number between six in the morning and four in the afternoon. The present staff consists of our lately appointed manager, M. E. Luce, and Frank Ross asst., several familiar names are found among the boys. Jim. B. Coulter, L. A. Langworthy, Billy Talcott, J. P. Keene, E. Keene, Jr., J. B. Skelly, Frank Miller, B. R. Stevely, and Harvey Mathburn, night report man. Mr. M. Keating and John Frits are receivers at the local counters, but in cases of a lively oil market it requires manager, assistant, operators and messengers to receive the constant string of messages that are passed over the counter leading into the Oil Exchange. Billy Talcott, while visiting his mother at Parker the other day, happened to drop in the office at that place during a little rush and was asked to help them out by Manager Wolff. He sat down to the Oil City quad and received some 300 from Jim Coulter without a break. Any one knowing the above-mentioned James can vouch for the "soonness" of "those" 300 Coulter is without doubt as fine a sender and Talcott as fine a receiver as any in this part of the country. The Keene Bros., Jim and Ed., since its origin have taken care of the N. Y. duplex. Brower and Ellis are at the Gotham end. We are anxiously looking forward to the occupancy of the new office, which is conveniently located in the new Oil Exchange, and will be shortly completed.

MARRIAGES.

EMERY—COLLINS.—At Salt Lake City, Utah, by the Rev. John McElowny, Ernest W. Emery, of Salt Lake City, to Miss F. E. Collins, of New Orleans.

BLANCHARD—WILSON.—Feb. 6th, 1878, at the residence of the bride's parents, in Fulton, N. Y., by the Rev. E. Moyses, Mr. E. Frank Blanchard, manager Fulton W. U. office, to Miss Carrie Wilson.

BIRTHS.

January 14th, 1878, to A. T. McElhiney, manager W. U. Telegraph Co., Bloomington, Ill., a daughter.

January 31st, to Mr. W. H. Cooper, assistant agent C. R. R. of N. J., Ocean Beach, N. J., a daughter. Second edition.

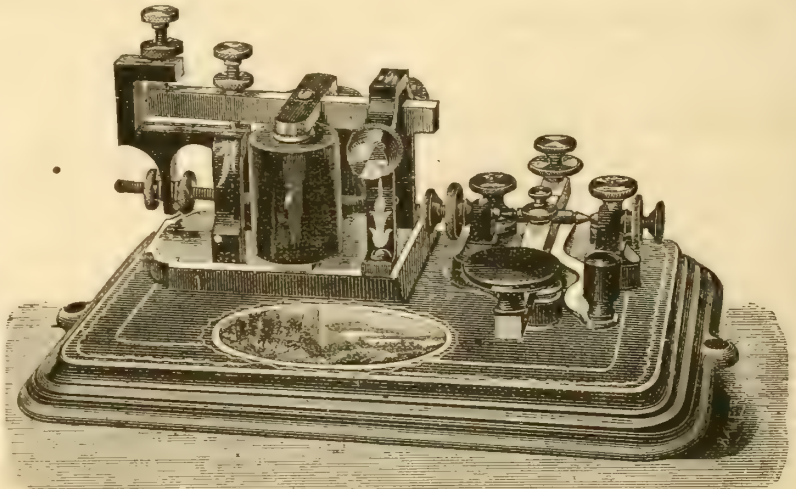
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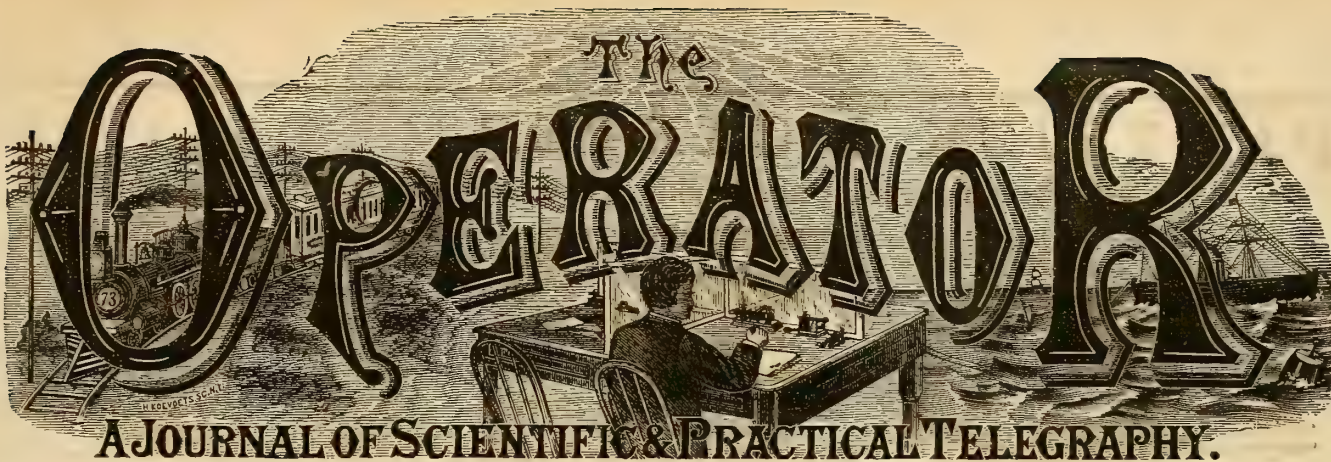
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VOL. IX.

NEW YORK, MARCH 1, 1878.

No. 5

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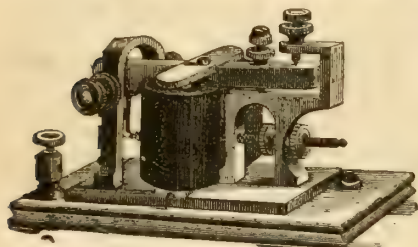
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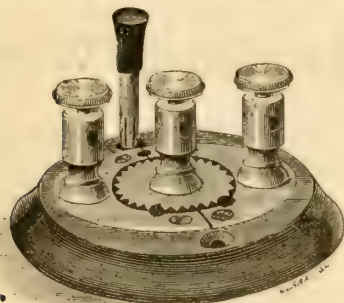
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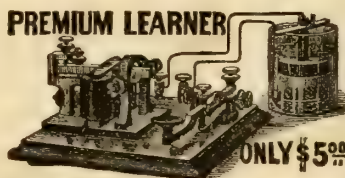
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Exposure in a city gas pipe has not injured it.

Thorough experiments have shown that it does not suffer injury by the most destructive insects of land or water.

Samples of the core or insulated conductor of Kerite cables have for a long period been laid in the Caribbean Sea, yet the "teredo," which would have speedily destroyed other cables thus exposed, has left these entirely unharmed. And experimental lines on the Isthmus have been equally exempt from the ravages of the white ant, which destroys wood telegraph poles so rapidly that iron poles have been substituted.

The same qualities which rendered it so indestructible by all corrosive agents, insures its durability for an indefinite period in all climates.

It can be stored in tropical climates without change of insulation under circumstances which would rapidly deteriorate and destroy the essential qualities of gutta-percha and vulcanized india-rubber.

The Kerite-covered wire is used almost exclusively by the United States Navy Department in the torpedo experiments which have been going on during the past three years. Prof. Farmer, the Government instructor, says of it, "It fulfills the conditions required in the torpedo service better than any insulator with which I am acquainted."

EMINENT ELECTRICIANS AND PRACTICAL TELEGRAPHISTS commend and recognize the Kerite insulation as superior to all others.

GEORGE B. PRESCOTT, Esq., Electrician of the Western Union Telegraph Company under date of Sept. 25, 1874, says:—"In September, 1869, we placed some of your Kerite wire, unprotected by any covering whatever, in the tunnel under the river in Chicago, and have since continued its use in that exposed situation with the most gratifying results. A portion of the tunnel is wet wet, and the other portions they are kept alternately wet and dry, which is well known to be one of the severest tests that any insulating material of an organic nature can be subjected to; and yet after five years' exposure, under the above conditions, the Kerite covering shows no signs of decay or deterioration. An insulating covering of india-rubber or gutta-percha under the exposure, would have been destroyed in much less time."

February 12, 1877, he writes further, "This piece of Kerite wire, unprotected by any covering, was in use in the tunnel under the river in Chicago from Sept. 1869 until December, 1876, and shows no signs of decay or deterioration in its insulating qualities."

Prof. MOSES G. FARMER says, "I have used your Kerite as leading wire more or less for four or five years. It stands abuse, changes of temperature, alternate wetting and drying better than any insulator I have tried."

Messrs. GAWMELL & Co., proprietors of the American Fire Alarm and Police Telegraph have used the Kerite wire for ten years. They say: "We have placed it in use in some sixty cities extending from Halifax, Nova Scotia, on the north to New Orleans and San Francisco, on the south, and west, embracing every variety of climate, and it has proved itself to be, under all circumstances, the most reliable and indestructible insulator known to us for telegraphic purposes."

Mr. M. A. HARDY says: "I have used it not only in this country, but also in Egypt, where it was subjected without injury, to the most severe treatment. * * * I also had the Kerite cable for several months in the Mediterranean Sea, and always found it reliable and unaffected by the ravages of "teredo.""

Many other equally favorable and satisfactory commendatory letters are in the possession of the proprietor.

At the Centennial Exhibition at Philadelphia, Sir WILLIAM THOMSON, the eminent electrician and scientist, awarded to the

KERITE INSULATED WIRE AND CABLES

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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

March 1st, 1878.

Volume IX.

Whole No. 97.

One Way.

One arm to pass around a lass,
And then to somehow work it,
The other hand in her's to land,
And so complete the circuit.

To sit alone, a telephone
Her ear, in which is sounded
A tender word, no sooner heard
Then both her eyes are grounded.

While mine are bent to woo consent
And lovingly entreat her,
The blushing Miss to kiss and kiss,
And prove a good repeater.

To pleading say, Oh, name the day,
And hear the word escape her,
'Twas thus I found my wife by sound,
You get it here on paper.

X. R. DUPLEX.

Consumption Among Telegraphers.

WERNER.

From the eleventh annual report of the Telegraphers' Mutual Benefit Association, recently published, it appeared that during the past year out of sixteen deaths of its members, fourteen were from consumption; that is, in other words, 87½ per cent., or seven-eighths of all the deaths in our profession are the result of that insidious disease. Now, if a reason for this mortality from a particular malady could be arrived at, we might do very much toward arresting its progress; and, in seeking, on a pulmonary basis, that end—the plain truth—no bias or misplaced sympathy should be allowed to interfere with the inquiry.

It is stoutly contended by most chief operators, who, by the way, neither die nor resign, that common operators superinduce consumption by self-imposed hardships, and occasional riotous living, not wholly unconnected with pay-day, which they have not sufficient vitality to withstand. There are, however, too many glaring facts to the contrary to allow this theory to stand for a moment. For instance, the renowned Jim Lawless is said to have once survived two weeks without beer, and, although the story looked strongly improbable, and was scornfully denied at the time by Mr. Lawless in person, there are too many cases on record to doubt the ordinary operator's tenacity of life, or that "hardship," in the usual acceptance of that term, is the prime cause of consumption in our ranks. To illustrate further: in the "Russian extension" expedition, some years ago, where in winter the thermometer ranged one hundred degrees below the freezing point, and where there were only three hours of daylight out of the entire twenty-four, were telegraphers fresh from their comfortable homes, without proper accommodations, and many of them sleeping all night in the open air, there was not a single man lost from accident, exposure, or any disease incident to the Arctic region, although the working force consisted of 250 men. In our native country we find the common operator, in storm and in sunshine, proceeding to new fields of labor, now to Washington, again to New Orleans, and at another time to Canada; and in accordance with the time-honored usages of the profession, and the peculiar exigencies of the situation, we find him going thither a-foot. Still, with all these apparent hardships, there is no suspicion of consumption from those causes, and operators are positively known to thrive best when sentenced to twelve hours a day on low salaries in lonesome and badly ventilated railroad stations. Even in Chicago, where the fourteen or fifteen working operators are forbidden to stand up, or even to straighten their backs during the day, owing to the depressing presence of thirty-one chief operators of immense conversational powers, the deaths from

consumption are not as numerous as they would be if operators were not an exceptionally robust class of men; and, although we have many a headache, many a bursting heartache, many a cramped chest and palsied arm, fatigue soon succumbs to a cheerful nature, and we, as a class, suffer no permanent injury from those causes. These facts, then, point to the theory that the present fearful rate of mortality from consumption is due rather to a mental than a physical oppression of the unhappy victims. There is a wide difference of opinion on this point, the "scientific, official and social leaders of the telegraph in the North-west," holding vastly different views regarding common operators from those expressed by Mr. Orton in the concluding portion of his Annual Report for 1876; but, nevertheless, all parties agree upon one point, viz., that seven-eighths of all the deaths in our profession are from consumption. General Eckert, while freely admitting the force of this latter fact, would insist that it is due to the inexcusable and sinful absence of a uniform tariff rate of 25 cents, with a prize chromo for each customer thrown in. Mr. Gardner G. Hubbard would put the blood of consumptive operators on the head of the Federal Government for its fiendish neglect to inaugurate a Postal Telegraph Service. Mr. Ashley would unhesitatingly prescribe the stamping out of competition in telegraphy as a panacea for all pulmonary complaints of the operators, while Mr. F. W. Jones, who is "gaining an influence which no operator can afford to ignore," would strenuously assert that the untimely death from consumption of seven-eighths of the profession is entirely due to the well-known and preposterous lack of interest in his "lessons on the Jones quad." It has even been sneeringly remarked that this lamentable decimation of our ranks is due to an habitual reading of the *Journal of the Telegraph*, since the fish-like and ancient odor of its news is prevalent all over the country, owing to its liberal and mainly gratuitous distribution. This theory is even more absurd than the others, for in no case is old news necessarily fatal; and, although the venerable *Journal* still insists that a Western Union General Order, seven columns of "Tariff Bureau," and twenty-one columns of advertisements furnish all the reading necessary for the most aesthetic telegrapher, there is no reason why our despondent craftsmen should die from too much *Journal* while THE OPERATOR flourishes and shines for all. Nay, on the contrary, I believe that the *Journal* actually conduces to our longevity, since it comes out strong occasionally with a suicide of some obscure pig, or the defalcation of another, and even affords us such funny jokes as instructing operators in official form to punctuate when sending Press reports, and to make "H" (...) after each paragraph. I must admit, however, that "news" containing such startling information as "there is three words in 'come home to-night'" has a most depressing effect upon those to whom copies are so regularly mailed free. Still, the sweeping assertion will stand, that our respected official *Journal* actually has a revivifying effect upon the delicate members of our profession; for, upon reading one of its seven-column articles on "The Advantages of Galvanized Iron," the sickest operator in the country would be goaded thereby to make one more effort to live that he might enjoy the satisfaction of kicking its scientific author. In view of the above facts, then, it would be manifestly unfair to say that our official paper—to which, with the foregoing unsolicited argument in its defence, I renew the assurances of my distinguished consideration—is the cause of the fearful mortality in our ranks.

The true cause has long been understood in professional circles, and now that there can be no further use for concealment, it may as well be said candidly that too much "chief operator" is the dreaded scourge which is rapidly filling our cemeteries with a choice selection of telegraphers.

Everybody knows that chief operators are a distinct and vastly superior set of men to common operators, and when this fact is thoroughly understood the whole story is told—history is but repeating itself. It is the old, old story of the conflict between superior and weaker forces—the brief struggle for existence; the utter extinction of the weak and triumphal survival of the fittest. The fight has not yet ended, for the common operator has still enough left of his boyish pride to come around with a new paper collar occasionally, but absolute subjection to the chief's iron will is surely, even if slowly, doing the work of extermination. There is Chicago office, for instance—"the model office of the world"—districted, sub-districted, re-districted and re-sub-districted in the most lavish style, with the whole system grouped in five Grand

Divisions (A, B, C, D, and E.) until every table and pneumatic tube is under the immediate supervision of a chief of vast powers of intimidation; the distinction, meanwhile, between managers antediluvian and managers modern, emeritus chiefs and active chiefs, assistants *de facto* and assistants *de jure* being drawn with consummate skill and placed with unblushing regularity upon the company's pay-roll. The scholarly letter of "Argus" in THE OPERATOR of February 15th has painted the picture in its official colors, but as those people who doubt an operator's testimony on general principles may also doubt the "too muchness" of chief-operatorism, we can hoist them on their own printing press, and refer back for proof to the *Journal of the Telegraph* of November 16, 1877. There they will find (page 338, placed slyly by Mr. Ashley immediately after an article on "addresses to messages of colored persons") a list of thirty-one chiefs and assistant chiefs in "the model office of the world," with their various titles appended, not forgetting even the humble "Cyrus B. Cobb," who, ignoring the august presence of thirty assistant managers, "very efficiently fills the post of manager's secretary." It is well to be precise in these statements, for I am quoting from the official *Journal*. That official correspondent, with more sarcasm, doubtless, than he intended, likened the new system of espionage, "with all its works set in harmony," to a "watch;" an indication that his private views on the propriety of keeping official spies oozed out through his official zeal.

The plan of having innumerable officials, however, does not even possess the merit of originality. The system has been introduced in this country, in the army; and, to a limited extent, in the South; but never since the breaking up of the Dignity Lodge of the Chivalrous Knights of the Dark Secret, (a colored organization in Georgia)—when four of the Supreme Grand Kings knocked down two most eminent Emperors with their own whitewash brushes, and, after ruthlessly trampling upon eleven Generalissimos, made off with the funds (sixty cents) in the treasury vaults—never since then, I repeat, has history recorded an instance of thirty-one titled personages in so small a body of simple individuals who pass muster under the generic title of "men."

Under these circumstances conscientious chief operators, especially where there are thirty-one of them in a second class office, feel that they ought to do something for their salaries; and, therefore, there is much rivalry in the only avenue left open to them, viz.: concocting general orders upon every conceivable subject. A general order usually makes two octavo pages, and in an office where there are thirty-one chiefs, supposing that each chief issued only one order a week, a very slight calculation will show that the operators of that office will have to read and observe 3,224 octavo pages of general order every year. As these orders are continually superseding each other, it will readily be understood that an operator's fate is peculiarly tragic, and the honest efforts of a conscientious young man to send and receive messages without violating at least half a dozen of the newest rules, are particularly trying to his constitution. When a chief tells him in an arbitrary manner, to "file sent messages on this hook, and received messages on that one," he does so willingly; but when, just as he is becoming used to that arrangement, the same whimsical chief tells him coolly to reverse the operation, and to file sent messages on the "received" hook, and received messages on the "sent" hook, he begins to reflect that life is not all that we planned it to be; and, if he has the slightest predisposition to consumption, a general order from the devastating pen of the twenty-eighth assistant chief will develop it in all its lingering horrors, and make the victim sadly yearn to meekly lie down and die.

Fault-finding, I am aware, is ever odious to all concerned, and the critic who picks out a flaw in any organization without offering some new theory as a substitute for the plan criticised, exposes himself to the suspicion of being a carping lunatic. Besides, it is a well known fact that our worthy executive officers are trying to make the service agreeable to us, and attractive to the coming generation of operators, so that it is not only our privilege but our bounden duty to point out in a becoming manner whatever we deem to be objectionable in the management, and to suggest respectfully such remedies therefor as may seem to us most efficacious. It should not discourage us to see that our negligent Chicago brethren have permitted the good old plan of extinguishing chief operators (by the periodical taking up of a cash collection for some charitable purpose) to fall into disuse. I reproach them thus because, while knowing as well as we

eastern men do that nothing creates a scarcity of chief operators quicker than the circulation in the office of a voluntary fifty-cent subscription paper, the plan has never been vigorously pursued in that benighted city. The eloquent "Argus" now proposes as a remedy the curtailment of the Chief of Quad Brigade by "at least half a score, and requiring the remaining fifteen or more to act alive in well trained duties." Now, this is all very well in its way, but in the end it merely shows the degeneracy of the modern Chicago operator, who is willing to rejoice at the presence of "only" fifteen chief operators in a single second-class office. But let me ask Argus a question: Why should any individual or corporation retain fifteen chiefs—even out of the present thirty-one named in the *Journal's* official list—while there are poles to be painted outside, wood to be sawed, and coal to be shovelled in for the use of the office during the winter, and batteries to be cleaned at all times?

It is folly for our Chicago brethren to propose halting and absurd plans for the partial abolition of superfluous chiefs, since the latter are obviously the superior and stronger party. As Argus has aptly quoted: "A house divided against itself cannot stand;" and any angry strife must result, as I observed before, in the ultimate extinction of the weak and survival of the fittest. An open fight between a common operator and a chief, although a spectacle of true heroism, would be but a sorry affair, since the Grand Chief, smiling confidently in his official capacity, would have nothing to do but to sit on his official high stool and point the withering galvanometer of scorn at the miserable subordinate.

Reason, then, points as a compromise to the almost obsolete "amalgamation" or "evolution" plan, to which—with my distinguished regards—I desire to call the earnest attention of our Chicago officials. This process of amalgamation is scrupulously fair; it is cruel to none since it abolishes no one; it creates no bickerings, no jealousies, but, on the contrary, mingles and binds all by a closer tie of relationship. The geranium and the rose derive brighter hues and sweeter scents from union with varieties of their own species; the fleetest racing stock is produced by its means, and there can be no doubt that the science if introduced into the telegraphic world, and judiciously managed, would speedily result in the evolution of a new race of telegraphers, among whom consumption would be unknown, since there would necessarily be less chief operators and better ordinary workmen. Thus, to cite a few instances of the vast improvements possible, anybody can see that a carefully managed "cross" between a California plug and a traffic chief, though rather disadvantageous and unjust to the poor plug, would conduce to the ultimate benefit of us all by demonstrating to our worthy President and the Executive Committee, how little a traffic chief is missed from the official ranks. Again, by amalgamating a Chicago emeritus "Chief of Red Blanks" with an Oregon lineman, the company would gain an excellent battery man, while the judicious coalescence of a "second-assistant chief of sub-division 14," a Mexican mule and a Kentucky night operator, (warranted to sleep on duty six hours every night) would produce an average two thousand dollar assistant manager.

By this process we could soon reach a point where there would be, once more, more operators than chiefs, more work done in a given length of time; one man, and only one, responsible for each office; no conflict for the survival of the fittest, and consequently less mortality—at all events, less consumption—in the company's treasury, if not in our ranks.

Telegraphers' Paralysis.

It is now recognized, pretty generally, that whatever the invention of the telegraph may have achieved for civilization, its operation has carried disastrous results to many operators by entailing paralysis of the wrist. So far as I know, I was one of the first, who had ever been expert as a sender, to wake up one morning and find myself famous as one of the clumsiest transmitters of the day. So rare were cases of this partial paralysis at the time, that my friends regarded my misfortune as a joke, rather than as a serious affair, and such cheerful expressions as "club foot," "timber toes" etc., greeted my appearance on the wire, while those in the same office who watched me sending, first with my thumb and then with my little finger, were wont to suggest that I could no doubt make a sensation if I were to stand on my head and try it that way.

But in the course of the next six months I had

another unfortunate to bear me company. From being one of the prettiest senders in the New York office he became one of the worst. Simultaneously there disappeared from the New York wire, in the Cleveland office, a gentleman who had made it interesting for receivers on that circuit time out of mind. Inquiry as to his whereabouts developed the reply which is now so readily understood, to wit: "he has lost his grip." Another gentleman, between whom and Mr. Boileau the honors, as fast and finished senders, were at one time pretty evenly divided, was disabled more than a year ago, and forced to leave telegraphy as a profession. In one office which I visited last summer I counted five men who were laboriously sending with their left hands, and I was informed that clumsy as they were with their left members they were even worse with their right.

I have been led to speak of these things from having recently seen an operator, whom I regarded as one of the fastest and most perfect senders living, stricken at short notice with the trouble, which has been appearing, of late years, all over the country. His physician gives the clearest solution of the difficulty that I have yet heard, viz: "the nerve from the brain to the elbow becomes 'obstructed' and the nerves of the lower arm and hand fail to respond promptly to the will." From my own experience, and from a general discussion of the subject with those similarly afflicted with myself, I have no doubt whatever that the physician quoted above is entirely correct. It is a singular circumstance, however, that without exception, so far as I know, the men who have lost their faculty to send with their old time ease and speed have not degenerated as receivers. This, it seems to me, is conclusive proof that the telegrapher's trouble is not identical with "pen palsy" as has been maintained. Nathaniel Hawthorne was afflicted with the latter, and, as is well known, dictated nearly all of his books to an amanuensis. One of his biographers states that he could use his hand for any other purpose than writing, but the moment he closed his fingers about a pen-stock his hand became powerless, and any effort to write entailed pains extending the entire length of his arm. Likewise it seems to be sending which the operator who has "lost his grip" must avoid. He may continue to receive, or may take up the profession of a reporter, or do almost anything else without discomfort. The right arm, which is so unmanageable when placed upon a key, and which becomes painful if used in that manner, is as strong and cunning for other purposes as ever, and work of another kind does not result in pain.

When we consider the tax which the sending of the Morse alphabet imposes on the nervous system, perhaps we shall not be surprised that a once brilliant light in the telegraphic firmament disappears at intervals, but shall wonder, rather, that the many last so long. Counting the up and down strokes of the hand the Morse alphabet averages, let us say, five movements to each letter, and English words average five letters to each word. In sending five thousand words per day (and we have men on the Associated Press wire who send ten thousand) the operator must make one hundred and twenty five thousand movements of his hand per day, or some forty millions per year. At the end of ten years he has used that particular set of nerves from four to five hundred millions of times! Is it wonderful, then, that nature rebels? A gentleman of my acquaintance, now suffering from disability of the character under consideration, gives it as his opinion that the Morse alphabet is at the bottom of the trouble. It seems like a startling proposition, but he follows up the assertion by adding: "When your hand is down on a dash your nerves are at rest. Of course the rest thus obtained is almost imperceptible, but it counts. For instance," he explains, "when I write the word 'shipper,' or a similar one, a pain goes shooting up my arm and a series of words, in which dotted or spaced letters predominate, will send a painful shock to the back of my head and down my spine. But such words as 'amendment,' 'government,' 'abridgement' etc., cause me no pain whatever. I rest on the dashes, somehow, and amble along as comfortably as ever."

The gentleman whom I have quoted is sincere in believing that if the dotted and spaced letters were replaced by letters composed of dashes, we should hear very much less of the telegraphers' paralysis; and my own experiments, and the testimony of several gentlemen who are interested in the subject, though they still retain their original expertness as senders, persuades me that this is a point worth thinking about and discussing. I hope that those who have ideas on the subject will follow up this

paper with some feasible suggestions. Though practically removed from the field, I still have too much pride in a profession in which I served a long apprenticeship to contemplate, with patience, the probability that those who follow it are to become an army of cripples.

Possibly the appended alphabet, which has in no instance more than four dots or dashes to the letter may be worthy of consideration.

ALPHABET.

A. . . .	N. . . .
B. . . .	O. . . .
C. . . .	P. . . .
D. . . .	Q. . . .
E. . . .	R. . . .
F. . . .	S. . . .
G. . . .	T. . . .
H. . . .	U. . . .
I. . . .	V. . . .
J. . . .	W. . . .
K. . . .	X. . . .
L. . . .	Y. . . .
M. . . .	Z. . . .

FIGURES.

1.	(W N)	6.
2.		7.
3.		8.
4.		9.
5.		0.

PUNCTUATION, Etc.

Period	(U D)
Exclamation Point	(X N)
Interrogation	(D N)
Paragraph Mark	(P F)
Parenthesis	(A F)
Brackets	(B F)
Colon	(C N)
Semicolon	(Sc)
Dash	(D A)
Quotation Marks	(2 commas)
Dollars only	(D)
Dollars and Cents	(D C)
Pounds Sterling	(P D)

In closing allow me to say that I appreciate the unpopularity of any move looking to a change of alphabet, and I am aware of the arguments to be employed against such changes as I suggest, having myself used them, effectively, in 1873, when the adoption of the Continental alphabet was agitated. Nevertheless, since no one else has come forth to take a shy at the subject, I let fly my arrow and bend my head to the coming storm. Whatever else may be said in reply to my suggestions, no one can accuse me of any but the best of intentions toward the profession, though he may not be disposed to swallow my prescription for the ills which now afflict so many. However, I am willing that any other doctor shall prescribe, and I remain,

Very respectfully, yours,

WALTER P. PHILLIPS.

OFFICE OF THE NEW YORK ASSOCIATED PRESS, Feb. 25.

The Telegraph Girl.

A STORY OF THE ENGLISH POSTAL TELEGRAPHS.

BY ANTHONY TROLLOPE.

"Will you not say that you love me?"
 "I am such a poor thing," replied Lucy.
 "A poor thing are you? Well, yes; there are different ways of being poor. I have been poor enough in my time, but I never thought myself a poor thing. And you must not say it ever of yourself again."
 "No?"
 "My girl must not think herself a poor thing. May I not say, my girl?"
 Then there was just a little murmur, a sound which would have been "yes" but for the inability of her lips to open themselves.
 "And if my girl, then my wife. And shall my wife be called a poor thing? No, Lucy. I have seen it all. I don't think I like poor things; but I like you."
 "Do you?"
 "I do. But now I must go back to the City Road and give up charge and take my money. And I must leave here at seven, after a cup of tea. Shall I see you again?"
 "See me again! Oh, to-day, you mean. Indeed you shall. Not see you off? My own, own, own husband!"
 "What will they say at the office?"
 "I don't care what they say. Let them say what they like. I have never been absent a day yet with-

out leave. What time shall I be here?" Then he named an hour. "Of course I will have your last words. Perhaps you will tell me something that I must do."

"I must leave some money with you."

"No, no; not yet. That shall come after."

This she said smiling up at him, with a sparkle of a tear in each eye, but with such a smile! Then he caught her in his arms and kissed her.

"That may come at present at any rate," he said.

To this, though it was repeated once and again, there was no opposition. Then in his own masterful manner he put on his hat and stalked out of the room without any more words.

She must return to the office that afternoon, of course, if only for the sake of explaining her wish to absent herself the rest of the day. But she could not go forth into the streets just yet. Though she had been able to smile at him and to return his caress, and for a moment so to stand by him that he might have something of the delight of his love, still she was too much flurried, too weak from the excitement of the last half hour, to walk back to the Post Office without allowing herself some minutes to recruit her strength and collect her thoughts. She went at once up to her own room and cut for herself a piece of bread, which she began to eat, just as one would trim one's lamp carefully for some night work even though oppressed by heaviest sorrow, or put fuel on the fire that would be needed. Then she leaned back in her chair, throwing her handkerchief over her face, in order that she might think.

Oh, how much there was to fill her mind with many thoughts! Looking back to what she had been even an hour ago, and then assuring herself with infinite delight of the certain happiness of her present position, she told herself that all the world had been altered to her within that short space. As for loving him there was no doubt about that! Now she could own to herself that she had long since loved him, even when she thought that he might probably take that other girl as his wife. That she should love him, was it not a matter of course, he being what he was? But that he should love her, that, that was the marvel! But he did. She need not doubt that. She could remember distinctly each word of assurance that he had spoken to her. "I ask you, because with all my heart I love you." "May I not say my girl? and, if my girl, then my wife?" "I do not think that I like poor things; but I like you." No. If she were regarded by him as good enough to be his wife, then she would certainly never call herself a poor thing again.

In her troubles and her poverty, especially in her solitude, she had often thought of that other older man, who had wanted to make her his wife, sometimes almost with regret. There would have been duties for her and a home, and a mode of life more fitting to her feminine nature than this solitary, tedious existence. And there would have been something for her to love, some human being on whom to spend her human solicitude and sympathies. She had leagued herself with Sophy Wilson, and she had been true to the bond; but it had had in it but little satisfaction. The other life, she had sometimes thought, would have been better. But she had never loved the man, and could not have loved him as a husband should, she thought, be loved by his wife. She had done what was right in refusing the good things which he had offered her, and now she was rewarded! Now had come to her the bliss of which she had dreamed, that of belonging to a man to whom she felt that she was bound by all the chords of her heart. Then she repeated his name to herself, Abraham Hall, and tried in a lowest whisper the sound of that other name, Lucy Hall.

She had been sitting nearly an hour when she started up suddenly, and again put on her hat and hurried off toward the office. She felt now that as regarded her clothes she did not care about herself. There was a paradise prepared for her so dear and so near that the present was made quite bright by merely being the path to such a future. But for his sake she cared. As belonging to him she would fain, had it been possible, not have shown herself in a garb unfitting for his wife. Everything about him had always been neat, fitting, and serviceable! Well! It was his own doing. He had chosen her as she was. She would not run in debt to make herself fit for his notice, because such debts would have been debts to be paid by him. But if she could squeeze from her food what should supply her with garments, fit at any rate to stand with him at the altar, it should be done.

Then, as she hurried on to the office, she remembered what he had said about money. No! She would not have his money till it was her's of right. Then with what perfect satisfaction would she take

from him whatever he pleased to give her, and how hard would she work for him, in order that he might never feel that he had given her his good things for nothing.

It was five o'clock before she was at the office, and she had promised to be back in the lodgings at six, to get for him his tea. It was quite out of the question that she should work to-day.

"The truth is, ma'am," she said to the female superintendent, "I have received and accepted an offer of marriage this afternoon. He is going out of town to-night, and I want to be with him before he goes."

This is a plea against which official rigor cannot prevail. I remember once when a young man applied to a saturnine pundit who ruled matters in a certain office for leave of absence for a month to get married. "To get married!" said the saturnine pundit. "Poor fellow! But you must have the leave." The lady at the telegraph office was no doubt less caustic, and dismissed our Lucy for the day with congratulation rather than pity.

She was back at the lodging before her lover, and had borrowed the little back parlor, spread the tea-things, and herself made the toast in the kitchen before he came.

"There's something I suppose more nor friendship betwixt you and Mr. Hall, and better," said the landlady, smiling.

"A great deal better, Mrs. Green," Lucy replied, with her face intent upon the toast.

"I thought it never could have been that other young lady," said Mrs. Green.

"And now, my dear, about money," said Abraham, as he rose to prepare himself for the journey. Many things had been settled over that meal—how he was to get a house ready, and was then to say when she should come to him, and how she should bring the boy with her, and how he would have the banns called in the church, and how they would be married as soon as possible after her arrival in the new country. "And, now, my dear, about money?"

She had to take it at last. "Yes," she said, "it is right that I should have things fit to come to you in. It is right that you should not be disgraced." "I'd marry you in a sack from the almshouse, if it were necessary," he said with vehemence.

"As it is not necessary, it shall not be so. I will get things—but they shall belong to you always; and I will not wear them till the day that I also shall belong to you."

She went with him to the depot and kissed him openly as she parted from him on the platform. There was nothing in her love now of which she was ashamed. How, after some necessary interval, she followed him down into Gloucestershire, and how she became his wife standing opposite to him in the bright raiment which his liberality had supplied, and how she became as good a wife as ever blessed a man's household, need hardly here be told.

That Miss Wilson recovered her health and married the hairdresser may be accepted by all anxious readers as an undoubted fact.

THE END.

Delivering A Message.

How joyous I felt that spring morning as I donned my new straw sun hat, and drew on my gloves, preparatory to going out with the message I had just copied with many a flourish. It was lonely out of doors, and I was glad to get out of my small office, although it looked cosy and inviting enough, with its neatly swept carpet, dark table, and shining instruments. "Truly," I said to myself, in a moralizing tone, "operators have much to be thankful for. Their crosses are comparatively few. Here I left my poor landlady scrubbing away this morning, while I can take a pleasant ramble, and be attending to my legitimate business at the same time."

I walked briskly along with the envelope containing the message, and on which was written, "Mrs. Charles Burnam," in my hand. At last I came to a little white house, standing in a grassy yard, and opening the gate I passed up a pathway paved with brick, and rung the door bell. A lady with a morning dress on, and her hair still in curl papers answered the summons. The moment she opened the door her eyes fell on the envelope, and she saw the words, "Western Union Telegraph Company" printed thereon. Throwing up both hands, she exclaimed:

"Oh, Miss Operator, is my dear Charlie dead?"

"Nothing of the sort," I was going to say but she interrupted me after the first word.

"Nothing harder than for you to be the bearer of

such news, you were going to say," she said. "I always thought if anybody had much feeling they'd never get into telegraphing, but of course you'd say that anyway."

Again I tried to speak, but she drowned my voice by her own as she went on:

"My poor Charlie! I knew how it would be. I told him I should never see him alive again when he went away, but he would go. That clock in the dining-room that hasn't struck before for two years, struck yesterday. I told Jane it wasn't her jarring it that made it strike, and now I know it was a forerunner of what was going to happen. Oh, do tell me how it happened, Miss Operator?"

"I presume your husband is?"—I began, but she cried out:

"Is in heaven you are going to say, but I don't want to hear anything of the kind. You might have broken it to me sort of gently, and not stood right before my face and eyes with that horrid yellow envelope in your hand. I knew I was a widow the minute I saw it."

She was weeping convulsively all this time, and not a word would she allow me to say to assure her that her husband was probably safe. I made one more attempt, however.

"But it is no"—

"No more than a good many others have to bear. Well, that's no comfort to me, you cold-hearted girl. Oh, my own dear husband! There never was such a kind and considerate man before, and never will be again."

While she was indulging in another paroxysm of tears, I managed by hurrying, to say:

"Shall I read your message to you, Madam?"

"You read it!" she exclaimed. "Do you think I am made of stone that I can stand and hear from a stranger's lips that my darling is lost to me forever? No, I will call Mr. Smith across the way."

Mr. Smith, who happened to be at work in his garden, came at once when summoned, and taking the wrapper from the message read:

NEW YORK, May 15, 18—

To MRS. CHAS. BURNAM, N—, Mass.

I shall be at home to-night. Cousin Sam and his family are coming with me. CHAS. BURNAM."

Mrs. Burnam turned to me with flashing eyes.

"You wretched, deceitful girl, what did you allow me to think my husband was dead all this time for? I should be ashamed of myself, young woman."

She slammed the door and went in, but through the open window her voice came to me as I walked down the brick pathway.

"I suppose the creatures get used to such things, and don't care if they scare anybody to death. And I'm mad as I can live with Charles. The house will be turned upside down in less than a day when those Lester young ones get here. I never did see anybody so thoughtless as Charles is."

Somehow an operator's lot did not seem so free from care as I walked back, as it had when I went forth, and, when, ten minutes after entering my office I received a reprimand from the wire manager for being absent from it so long, I concluded that my landlady, washing in her shady perch, and calculating the probable price of butter and eggs as she scrubbed, was a person to be envied. "Into each life some rain must fall," I mentally quoted, as I named the wrong tariff for a message. I did not notice my mistake until the customer was gone, and, as he lived out of town, I was obliged to rectify it by paying a quarter from my own rather than looking portemonnaie. "Such is (operator's) life."

L. A. CHURCHILL.

A CALIFORNIA ELECTRICAL SOCIETY.—A few days ago, our friend, Mr. Frank B. Rae, suggested the advisability of forming an Electrical Society in this city, for the purpose of exchanging ideas upon the science of electricity, and for the discussion of all matters pertaining thereto. The idea was eagerly seized upon, and within a few hours 27 signatures were obtained of those desirous of becoming members. With only one exception, every man in the main office expressed a desire to have such a society established. This evident "thirst for knowledge" is highly creditable, and augurs well for the future success of our new institution, the want of which has long been felt by those whose thoughts soar above the mere manipulation of the key, and who are desirous of keeping pace with this progressive age. A meeting for organization will shortly be held, and I hope soon to be able to inform you of the successful inauguration of the Pacific Electrical Society.

Very truly yours,
SAN FRANCISCO, Feb. 11.

SPRING.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

March 1st, 1878.

WESTERN UNION stock is quoted at 75 $\frac{1}{2}$, and A. and P. at 20 $\frac{1}{2}$.

CAN it be that in the suit of Mr. Benedict, reported in this issue, the Western Union is imitating Congress by trying to repudiate its bargain with the A. & P.?

IT would be rich if the compact between the Western Union and A. & P. companies, in regard to "pooling" receipts, should be set aside. Then stand from under!

WE are so crowded with matter, that unless short and of general interest, all articles for publication in a particular issue should reach us six days in advance of publication day.

THE annual meeting of the Dominion Telegraph Company was held at Toronto, February 18th. A copy of the annual report of the directors reached us too late for notice in this issue.

A CHANGE is made in Mr. Eugene F. Phillips' advertisement in this issue, to which we would draw the attention of the reader. Mr. W. H. Sawyer, as electrician and superintendent, will be very certain to maintain the good reputation that Mr. Phillips' insulated wires has so long enjoyed.

"THE Biographer" replies in this issue to the strictures of Argus upon the Chicago management, as well as himself personally, in last number. Thus the reader has both sides of the story. We presume, however, that "the other side" will have something further to say on the subject next issue. Until then let us reserve our decision.

GENERAL THOMAS T. ECKERT, President of the Atlantic and Pacific Telegraph Company, was married on Wednesday of last week, at Reading, Pa., to Miss Seitzinger of that city, a lady of wealth, culture and beauty. General Eckert and his wife sailed for Europe on the steamer Celtic, after the ceremony. Their tour abroad will extend over a period of two months.

WE understand that the last of the matter for Mr. J. D. Reid's book is in the hands of the printer. It is expected that the book itself will be ready for delivery early in April. This work, so long looked forward to, has been very carefully prepared, and will doubtless have an extensive sale, although the large number of pages, numerous steel engravings, and other expenses, will probably put the price considerably above that of the ordinary run of books.

An Alleged Rupture Between the Western Union and A. and P. Companies.

With the exception of the A. and P., the Western Union has managed to absorb in turn every presumptuous competing company that dared rise to dispute its exclusive right to transact the entire telegraphic business of the United States. To be sure, it didn't always need the additional lines thus acquired. In nearly every instance they were mere duplicates of some of its own, of poor material and worse construction, while the price paid was oftentimes rather exorbitant. But then by the arrangement the company was enabled to rid itself of an obnoxious rival, and, in the absence of competition, high rates of tariff could be maintained. Moreover, business was good and increasing, and the company could afford to pay a liberal price for the privilege of continuing a monopoly one-third whose gross receipts was net profit.

But in the process of time the A. and P. dynasty arose. In the bright lexicon of that company's charter there was no such word as absorption. Do what it might, the Western Union was unable to secure a lease of the A. and P. lines. Unfortunately, however, the latter company was controlled by stock speculators, whose sole ambition seemed to be to use it in such manner as best conduced to depress the price of Western Union stock. The A. and P. was run as a literal "opposition" company. Hundreds of new offices were sometimes opened in a single day—offices the opening of which the company's business did not necessitate, and whose prospects of paying were often doubtful in the extreme. The rates were reduced, also, until business was actually handled at a positive loss.

This, of course, was not legitimate progress, and could not last. It worried the Western Union, however, and that company in self protection agreed to "pool" the joint receipts, the A. and P. getting 12 $\frac{1}{2}$ per cent., and the Western Union the remainder. The latter company also purchased a controlling interest in the A. and P., paying therefor 12,500 shares of its own stock and \$95,000 in cash. This agreement was entered into August 20th, last. The Western Union is now beginning to wake up to the fact that it has made a bad bargain, and that although rid of the evils of an opposition, the benefits are more than counterbalanced by the additional expense incurred. In fact, to be more explicit, the Western Union finds that the expenditures of the A. and P. are largely in excess of its receipts; that in the first three months and eleven days of the merging or "pooling" of the accounts, the former company was obliged to pay out to the A. and P., under the terms of the agreement, an aggregate of \$120,000!

The Western Union has therefore become tired of its union with the A. and P., and is seeking measures for a divorce. As the *Herald* puts it, the old story of "marrying in haste to repent at leisure," is cropping up in new form, and all the wires of the united concerns are not strong enough to bind them together in unity. Application was made to Judge Donohue in this city, February 19th, by Elias C. Benedict and others, stockholders of the Western Union Company, for a perpetual injunction, restraining the Western Union from carrying out the provisions of the above agreement with the A. and P. Judge Donohue granted an order, returnable in twenty days,

ordering the defendant to show cause why it should not be restricted and permanently enjoined, as the complainants pray it may be, from further fulfilling the terms of the pooling arrangement. A copy was also served upon President Orton.

The allegations of the complainants are voluminous, filling forty pages of legal cap, and tell in legal phrase the story of the compact entered into by the two companies. After the formal allegation that the Western Union Company is regularly incorporated, stating the amount of the stock and other particulars of the organization, the complaint alleges that the company has for many years been able to pay dividends varying from 8 to 6 per cent. per year upon its capital stock, and that the value of its stock has been owing to its ability to earn and pay such dividends. It is authorized by law to operate only such lines as are built, or have been bought, by it, and has no right to use any of its money for the benefit of any other corporation.

The complaint then notes that the Atlantic and Pacific Telegraph Company is not owned or controlled by the Western Union, but is a distinct corporation, and a history of the agreement entered into by the two companies August 20, 1877, is given.

The allegation is further made that the passage of a resolution by which the pooling arrangement was made between the Atlantic and Pacific and Western Union, and the subsequent act of W. H. Vanderbilt, as arbitrator between the two companies, in fixing the proportion of expenses to be accounted for by each to the other, was not made after consultation with the stockholders. That no meeting of the stockholders was held or called, at which such action as was proposed in the resolution and afterward proposed by Mr. Vanderbilt might be submitted to them for their approval or rejection, and that if any ratification of the agreement was secured, it was without the knowledge of a large number of the shareholders, and lacked a competent vote and authority.

The complainants also say that since entering into the agreement in August, the officers of the Western Union Co. have rendered to the officers of the Atlantic and Pacific Company monthly statements of the gross receipts derived from the business of the company, and monthly statements of the expenses of the company incurred in doing its business. These statements cover the last eleven days of August, after the compact was arranged, and the months of September, October, and November, and the defendant has received similar monthly statements from the Atlantic and Pacific Company, and has "pooled" or merged the monthly accounts.

The plaintiffs further allege that during the above three months and eleven days, \$120,000, was paid by the Western Union Telegraph Company to the Atlantic and Pacific Company as its share of the joint earnings. It is further alleged by the complainants that if the Western Union Company continues to pay the Atlantic and Pacific Company for twenty years, according to the terms of the contract, at the same rate or proportion, the stockholders of the Western Union Company will be deprived of the large sum of \$9,600,000, which would otherwise be earned and would rightfully belong to them.

The price of Western Union stock advanced two per cent. on news of the above suit, while A.

and 'P. fell 1½. Rumor, therefore, immediately jumped to the conclusion that it was either a stock-jobbing operation, or an effort on the part of the Western Union to repudiate a bargain which did not turn out as profitable to it as it supposed it would.

Mr. Benedict claims to own one hundred shares of Western Union stock, but says he has usually held a larger amount. He has long been known as a warm friend of the managers of the Western Union, and a bitter opponent of the A. and P. Mr. Benedict's summer residence is at Greenwich, Conn., and when the A. and P. tried to get the right of way for its line through Greenwich, Mr. Benedict opposed it. It is, therefore, not at all unlikely that Mr. Benedict really speaks for the Western Union in his complaint; though the suit, on the other hand, may be but the honest effort of certain stockholders who think their company unfairly committed to an agreement which is lawfully voidable.

The officers of the A. and P. incline to the latter opinion. They say that the expenses of their company is not more than from \$25,000 to \$30,000 a month in excess of the receipts, and that the cause of this is that 437 of the best paying A. and P. offices have been closed, while almost one-half the company's lines have been surrendered, and are in use by the Western Union.

The progress of the suit will be watched with interest.

A Bill to Regulate and Tax Telegraph Companies.

The Western Union seems to encounter an extraordinary amount of opposition and annoyance of late. "One woe doth tread upon another's heels, so fast they follow." Pennsylvania insists upon the forfeiture of the company's charters in that State by reason of its consolidation with the A. and P. The New York Legislature, after putting the company to great expense to prevent the passing of an act requiring the running of wires underground through cities, now comes forward with another source of annoyance in the shape of a bill substituting iron telegraph poles in cities in place of the present wooden ones. And now Wisconsin wants to regulate and tax telegraph companies doing business within her border.

A bill has been introduced into the legislature which provides that any telegraph company doing business in Wisconsin shall make a report to the State treasurer on or before the first of April of each year of the amount of its gross receipts, on which it shall pay a tax of four per cent. The bill limits the message tariff for the first ten miles, for ten words, not including date, address and signature, to ten cents, and one cent for each additional word; for ten word messages above ten miles, and not exceeding fifty miles, twenty-five cents, and two cents for each additional word; for over fifty miles fifty cents for ten words, and three cents for each additional word. It provides that all messages shall be sent in the order received, with the exception of death messages and the associated and special press reports, and attaches a penalty of \$5,000 for not complying with the provisions of the law. The bill, which will probably be bitterly opposed by the companies, further provides for a pro rata tariff between telegraph companies.

Another New Telegraph Company.

The Boston *Commercial Bulletin* says that a new telegraph company has been organized in that city, and that it is before the public with a petition to the Massachusetts Legislature for a charter. The United States law provides that a corporation must have a State charter before it can take advantage of the Federal law allowing it to cross State lines. The "States Union Telegraph Company"—that is the title chosen for the new corporation—has prepared a bill granting a charter, of which it will ask the enactment. It will provide for the election, by the stockholders, of 25 trustees, who, in turn, will elect from their own number, a board of 5 directors.

The company will have an authorized capital of \$10,000,000, and its projectors purpose to act upon the plan of having the capital represent only the actual cost of the line. The amount named will construct lines between all the large cities. The United States law authorizes it to build lines upon "post-roads," which probably opens up all the railroad lines of the country. If the charter is obtained, as it doubtless will be, it is proposed to have a new line in operation between Boston and Washington by next August.

AFTER an absence of several months, Werner treats us in this issue to a scholarly and gracefully-written article in his own inimitable style on the subject of Consumption Among Telegraphers. We are sure that the readers of THE OPERATOR will cordially join with us in welcoming Mr. Christie once more among our list of contributors, and in hoping to hear from him regularly in future. Both editor and readers will long remember with gratitude and pleasure Mr. Christie's conscientious, able, and eminently satisfactory management of this paper during the editor's vacation in Europe last summer. Since our return, Mr. Christie's duties have prevented his writing anything for publication, but in future we hope he will have ample time to devote an occasional hour or so to the delectation of our readers. Besides his ability as a writer, Mr. Christie is one of the most thorough gentlemen we have ever met. Scrupulously upright, straightforward, and reliable, even to personal disadvantage, the profession should feel proud that in these days of defalcations, breaches of trust, and repudiation, it can boast of such a man. But Mr. Christie is, withal, so modest and retiring, that we question whether this little spontaneous outburst will not more or less displease him. He should remember, however, that unfortunately it is of but few men now-a-days that such language can be truthfully used.

MISS ROSE E. NORTHRUP, of the Western Union telegraph office at Olean, N. Y., sailed recently for Jacksonville, Fla., in quest of much needed rest and recuperation. Within a few months Miss Northrup has sustained the loss of every remaining member of the family, including her mother and brother, who died almost simultaneously. Her father had been killed only a short time before. It has been a matter of surprise to her many friends that she has borne up so bravely under her many sorrows, and they will be glad to learn that she has taken steps to protect her health, and will join with us, we are sure, in hoping that when she returns, in May, she will have entirely recovered.

Themes for the Thoughtful.

Envy shooteth at others and woundeth herself.
The wisest man is not free from a mixture of folly.
The great art of life is to play for much and stake little.

A wise man is never less alone than when he is alone.

Trust not the world, for it never payeth that it promiseth.

How to be wise—don't imagine that you know everything.

We are only really alive when we enjoy the good will of others.

A cheerful face is nearly as good for a patient as healthy weather.

Men who avoid female society have dull perceptions and gross tastes.

You have greatly ventured, but all must do so who would greatly win.

The beauty of the body is for a day; the beauty of the soul is for eternity.

Be calm in arguing, for fierceness makes error a guilt and truthfulness discourteous.

Every good deed that we do is not only a present pleasure, but a prop for the future.

If anger is not restrained, it is frequently more hurtful to us than the injury that provokes it.

We could not endure solitude were it not for the powerful companionship of hope or of some unseen one.

The most affluent may be stript of all, and find his worldly comforts like so many withered leaves dropping from him.

It is madness to make Fortune the mistress of events, because in herself she is nothing, but is ruled by prudence.

Men of great parts are often unfortunate in the management of public business, because they are apt to go out of the common road by the quickness of their imagination.

Talents give a man superiority far more agreeable than that which proceeds from riches, birth, or employment, which are all external. Talents constitute our very essence.

The best time to frame an answer to the letter of a friend is the moment you receive it. Then the warmth of friendship and the intelligence received most forcibly co-operate.

The head truly enlightened will presently have a wonderful influence in purifying the heart; and the heart really affected with goodness, will much conduce to the directing of the head.

But little men do perceive what solitude is, and how far it extends. For a crowd is no company; men's faces are like pictures in a gallery, and talk but a tinkling cymbal, where there is no love.

Habitual liars invent falsehoods not to gain any end or even to deceive their hearers, but to amuse themselves. It is partly practice and partly habit. It requires an effort in them to speak the truth.

The goodness which struggles and battles, and goes down deep and soars high, is the stuff of which heroism is made, by which the world is salted and kept pure. It is the seed which bears fruit in martyrs and makes men nobler than their nature, and demi-gods and the prophets of a better time.

Lessons of wisdom have never such power as when they are wrought in the heart through the groundwork of a story which engages the passions. Is it that we are like iron and must first be heated before we can be wrought upon? Or is the heart so in love with deceit that where a true report will not reach it we must cheat it with a fable in order to come at the truth?

a Without depth of thought or earnestness of feeling or strength of purpose, living an unreal life, sacrificing substance to show, substituting the fictitious for the natural, mistaking a crowd for society, finding its chief pleasure in ridicule, and exhausting its ingenuity in expedients for killing time, fashion is among the last influences under which a human being who respects himself or who comprehends the great end of life would desire to be placed.

The Biographer Replies to "Argus."

Almost the instant that the issue of THE OPERATOR for February 15th was out of press the news flashed along the electric cord from Gotham to the Garden City, that "there was something very rich and racy in its columns concerning the management of Chicago office." As the paper reached the various intervening points "fuel was added to the flame" of excitement by the comments of approval or disapproval entertained by the different "knights of the key" at the several places. Saturday morning the boys were wild to see a copy of THE OPERATOR, and a number rushed for the agent as soon as he made his appearance, to either buy a single copy or take a three months' subscription—on time. In several instances twenty-five cents was offered for a copy, or five cents for "a read," but holders being firm, the market went away up. In fact, one of the ten commandments was so far ignored, that a number of the boys rushed to the mail box in the operating room and appropriated to themselves the night operators' papers, wrappers and all; the unfortunate night operators having to beg a copy to look at, and be content therewith.

"Argus," the author of the article creating the excitement, in his anxiety to redress a supposed personal grievance, shows up Mr. F. W. Jones the assistant manager of the operating force here in rather an unenviable light, and, intentionally or otherwise, makes statements which are far from truthful; and assertions as to the management or mismanagement of Chicago office which are rather sweeping; and whether true or untrue regarding the parties he names, casts reflections upon others in authority against whom there has never been a murmur of complaint by subordinates.

"Argus" misleads the reader by his misreading of the biography which calls forth this tirade against Mr. Jones. The concluding paragraph does not call Mr. Jones the "leading telegrapher of the Northwest," but says that he is put forward as "the talented and noted telegrapher whose portrait shall lead the van from that section." The biographer intended other leading North-western telegraphers' portraits and biographies to follow. In fact, the publisher of THE OPERATOR has now in his possession the portrait of another prominent telegrapher. The assertion in the biography that Mr. Jones "knows no enemies" has been proven over and over again. A case in point: A gentleman on the force here, a bitter enemy of Mr. Jones', was in the line of promotion and possessed the necessary qualifications to become a chief operator. Mr. Jones recommended him for the position, and that gentleman holds it to-day with honor to himself and profit to the company.

Does "Argus," or any other man claiming to be of sound mind, suppose for a moment that quadruplex telegraphy was initiated in Chicago office merely to gratify the ambition of Mr. Jones? Such is the substance of the second paragraph of his communication. Geo. B. Prescott, the chief electrician of the W. U. Co., located at New York, is the gentleman who has something to say in regard to what kind of instruments shall be used in the different offices of the company all over the country. Mr. Jones simply carries out the orders he gets from headquarters. The third paragraph in regard to Mr. Jones' managerial aspirations looks very pretty in print, but is without any foundation in fact. It would hardly be necessary for Col. Wilson to connive with a subordinate if he wished to remove any manager, provided he had a good reason for so doing. I know of a certainty that Mr. Jones does not want the position, and that he and Mr. Maynard are upon the most friendly terms, socially and officially. The cowardly manner in which "Argus" attacks Mr. Jones for the kindly interest he has always taken in the operators here is extremely despicable. The history of the quad class is simply this. A few of the old men in the office, members of "the Chicago Electrical Society," not satisfied with the knowledge they obtained at the monthly meetings of that society, formed a class for mutual instruction. The class asked Mr. Jones as a particular favor to attend and instruct them.

Instead of the assistant chief operators being appointed out of the quad class, however, it is a well-known fact that very few of them were members either of the electrical society or attendants at the quad class meetings. Probably if Mr. Springer had made use of the judgment he is supposed by "Argus" to be possessed of, and, unprejudiced by any personal feeling, had named those "best qualified by age, experience," faithfulness, etc., for the four positions on the night force, his whole list would have been accepted. I understand, however, that

such was not the case, and that but one of those he named was satisfactory to all parties concerned.

How refreshing it is to know that we have such uninterested observers as "Argus" watching over the company's interest. It would be very interesting to a large majority of your readers here to know who those parties are that "have earned laurels as green and eulogies quite as elaborate" as that accorded to Mr. Jones. And we rather opine that those "numerous individuals who entertain doubts" as to Mr. Jones' merits could be counted on the fingers of one hand.

It is a matter of fact, in the history of the development of the quad system here, that Mr. Jones' quad does not consist merely of an arrangement to overcome the "kick" that "Argus" speaks of, but that the first Jones quad ever set up here by him (Mr. J.) has always worked and still works well and successfully to Detroit. Jones quad differs very materially from the Edison or Western Union standard quad, and the former has always worked more satisfactorily here than the latter. The Jones quad is much more preferred by operators, because it is adjusted similar to a Morse relay when receiving. At the present time there are more Jones quads working in Chicago office and in the West than of the Western Union standard.

The direct thrust given the biographer is very amusing. His "peculiar relations with his employers," and "the fulsome flatteries of his superiors" may "have earned him the position he occupies" (at the key), but he and those who know him best have always been of the opinion that he earned it by strict attention to business, being sober, reliable and honest.

In conclusion, I would say, referring to the editorial notice of the "Argus" communication, that you have been most woefully deceived. I know of at least half a dozen of the oldest men in Chicago office who will certify that "Argus" statements, in nearly every particular, are false in the extreme. When you are ready to print names I will furnish mine, or will exchange privately, that you may be undeceived, and do Mr. Jones justice by modifying your editorial comments.

CHICAGO, FEB. 22.

THE BIOGRAPHER.

Telegraphic Progress in 1877.

The past year, says the *Telegraphic Journal*, will probably come to be regarded in telegraphic annals as the year of the articulating telephone. Although the primitive form of this instrument was exhibited at the Centennial Exhibition, it was not until 1877 that it was perfected to its present simple shape, and introduced to the world as a practical telegraphic appliance. Inspired by the enthusiastic verdict of the Centennial Exhibition Commissioners, who characterized his invention as "perhaps the greatest marvel hitherto achieved by the electric telegraph," Professor Graham Bell prosecuted his experiments, and on the 4th of May, 1877, exhibited the speaking telephone in its present pattern, to a public assembly in the Boston Music Hall. On this occasion speaking and singing was transmitted with great ease, between the hall and the town of Providence, forty-three miles distant. During the rest of the year, a great variety of experiments were made to test the powers of the instrument. It was found possible to speak with facility through a resistance amounting to, at least, 12,000 ohms. The longest actual telegraph line as yet spoken through, is that from Boston to New York, a distance of 250 miles. The first practical application of the telephone was made in May, last year, by the Water Board of Cambridge, Mass., who established telephonic communication with the waterworks under their control. In Germany, where there is no patents taken out, the sale of telephones is said to be extraordinary, and the German Government telegraph authorities have promptly adopted them into their system of working, as, indeed, the English postal authorities have also recently done.

The instrument from its nature must become useful in a thousand ways, and it is not likely ever to become obsolete. Mr. Bell's is as yet the paragon form, and from its extreme simplicity appears likely to remain so. The feebleness of the sounds which it gives out is, however, its weak point; but it is hoped that this will be remedied in future. Already we hear that M. Trouve, of Paris, obtains more powerful undulatory currents by multiplying the diaphragms or the telephone, so that the vibrations of the voice are taken up by a number of similar vibrating surfaces instead of a single one, and produce a multiplied effect.

The articulating telephone of Mr. Thomas Alva Edison, followed hard on the back of Professor

Bell's, and is said to yield louder sounds, although the articulation is not so perfect, and the apparatus is much more complicated. Its action is based on the discovery of Mr. Edison's, that plumbago has the property of diminishing in resistance under pressure, in a degree proportionate to the pressure. This newly discovered property of plumbago promises to become a useful one in telegraphy. Mr. Edison has constructed a novel relay on the principle.

The invention of an apparatus by which it will be possible to graphically record speech at a distance, is a problem which naturally presents itself after the invention of an articulating telephone, and we were only recently informed that the problem has had a measure of promising success by the daring ingenuity of Mr. Edison. The phonograph, as the instrument for marking down the vibrations of speech is called, is an automatic reporter, and not strictly a telegraphic instrument; but if used in conjunction with the articulating telephone it will become so, since it will then be possible to record speech at a distance by permanent marks. The most striking result of this invention, should it be perfected to the degree anticipated by the inventor, will be the power which it puts into our hands of storing up the past utterances of people, and reproducing them by mechanical mimicry.

The adoption of underground in preference to overhead wires by the German Government, is an important indication of the slow revolution which is on foot in favor of the former. It has been settled by law that in future all the telegraph lines in the German Empire shall be underground lines. Three main lines have been laid between Berlin and Strasbourg, on the one hand, and Berlin and Kiel on the other, while Potsdam has been connected to Cologne. The advantages which subterranean lines have over aerial ones, are a greater immunity from earth currents due to thunder storms, freedom from sudden changes in insulation resistance, due to changes of the weather, entire removal from such mishaps as the overthrust and breakdown of wires and posts by gales, storms of sleet and snow in winter, or from the violence of mobs. The emancipation of the landscape from its unsightly fetters of rusty wires is by no means a point to be overlooked. The high preliminary cost of the system which has been raised as an objection to its use will be more than counterbalanced where the line is properly laid by the comparatively trifling expenses of maintenance as compared with that of an overhead wire.

Running Wires Underground.

At a meeting of the Baltimore City Council, February 14th, Mr. J. Frank Morrison, Supt. Police and Fire Alarm Telegraph, in a report upon the feasibility and probable cost of laying the wires of his department underground, said that only two experiments in underground telegraphs had ever been made in this country up to the year 1876. The first was when Prof. S. F. B. Morse, in December, 1843, inclosed four number sixteen copper wires, covered with cotton and varnished with shellac and beeswax, in a lead pipe, placed underground, between Baltimore and the Relay House. This was a failure. The second attempt was made in 1856, when nine miles of gutta percha covered wire was laid down on the line between Nantucket and Martha's Vineyard. This worked well at first but soon failed, and here ended the history of underground telegraph in this country. In Europe, however, from the earliest days of the telegraph, commencing about the year 1847, telegraph engineers have been engaged in perfecting systems of underground telegraphs until at the present time thousands of miles of subterranean telegraphs are in successful operation in the German Empire, France, Great Britain, Austria, and Russia, not only in cities, but along important lines of railway and elsewhere, where an absolutely safe and reliable telegraph is deemed a necessity.

The advantages of underground telegraphs consist in their almost absolute freedom from sudden and unexpected interruptions owing to high winds, storms, fires, accumulations of ice and sleet and the like, and consequent freedom from the cost and trouble of repairs, which with overhead lines, even when constructed in the best possible manner, are of frequent occurrence. The disadvantage may be briefly summed up in four words—original cost of construction.

In the German Empire underground wires are laid up in the same form as for submarine cables, and then laid in trenches and covered up with earth. In France and England, loose cables covered with tarred tape are drawn into iron pipes, the pipes

serving instead of the heavy iron guard wires of the German cables.

The plan most suitable for the wires of the Police and Fire Alarm Telegraph would be one similar to that of the English. It would require, in round numbers, forty-five miles of three inch cast iron pipe, and one hundred and forty-five miles of wire. The cost of this, then, would be as follows: Cost of pipe, 25 cents per foot; excavation 3 feet deep, 8 cents per foot; lead, oakum, etc., for joints, 6 cents per foot; laying in trench, 3 cents per foot; repaving, 8 cents per foot—making a total cost of 50 cents per foot, for laying the pipe. Boxes—cast iron—every three hundred yards for drawing in cable and making joints, about two hundred dollars per mile. This would make a total cost preparatory to drawing in the wires of \$2,840 00 per mile.

There is no cable made in this country fit for underground telegraph. The cost of imported English wire in Baltimore, duty paid, would be two hundred and twenty-five dollars per mile. The cost of drawing in, splicing, fitting, testing, etc., two hundred dollars per mile of pipe—the latter includes tools and equipments for the work. Add to this one hundred and fifty short iron posts fitted to carry the fire alarm boxes, at fifty dollars each, and [the total cost of the work would be \$176,925.

A Home-made Telegraph.

A few summers ago I worked for a short time in a pleasant railroad and relay office, in Eastern New York State, and it was there that I became acquainted with the existence of this curious affair, and some of the attending circumstances, which, in my memory, have still so much of novelty and freshness that I cannot refrain from telling of them.

An office was about being opened at a station on one of the branches diverging from the main line at our place, and I was requested to go down there and instruct the agent, who was to act as operator, in regard to keeping the accounts, and in some of the points pertaining to the workings of an office and of transacting business over the wire; for, although he was something of an operator, could write very plainly, and read sufficiently well by sound to handle the small amount of work to be done at his station, yet he had never seen a telegraph office, a regular set of instruments, or, doubtless, an operator! The manner in which he acquired what little of the art he had was this:

A farmer living a mile distant, who was of ingenious mind, had learned from some text book of philosophy used in the common schools the general principles of telegraphy, and then from a catalogue of instruments obtained ideas from which he constructed two relays, two sounders, two keys, several jars of battery, and even cut-outs and switches. He had procured the Morse alphabet, and he and the agent, who, being a warm friend of his, had been interested all along, now began to practice. A wire was hung in a curious manner from the farmer's house to the railroad station, supported by poles, trees, and fence stakes, but insulated very decently with glass, such as is commonly used to insulate lightning rods. The wire I found to work well, and the instruments, although clumsy and crude beyond all description, served admirably, working clearly and quite satisfactorily. The magnets were wound without any regard to evenness or regularity of coils, but the resistance was well calculated and evenly balanced.

Square iron nuts, probably found upon the railroad, served as adjusting levers for the relay; and yet the armature was an exquisite piece of work, being filed and cut in true workmanlike manner to the exact pattern of some of our stylish, modern manufacturers. The sounder magnets were four or five inches high, and the sounding post, if memory serves me rightly, was an iron bolt with nuts turned against each other, both above and below the armature; but, singularly enough, with the aid of a piece of tin the sound produced differed but little from that of the musical Phelps.

We impulsively opened the key after greeting the agent and had stepped inside his sanctum, and began to say something by way of trying the novel apparatus, when a singular though plain hand broke us, and bluntly inquired: "What?" The agent then told us that the usual way of calling was to rattle away at random and the answer was invariably "What." The stranger at the other end proved to be the farmer's wife, or, as we were told, "Mary." She was very anxious to know if John was wanted at the station, or if "the telegraph man" had come, in either of which cases she would go directly to the fields and call her husband. We learned that her

husband had left strict injunctions to send for him when "the telegraph man" should come as he wished to meet a real, live one, to see what he looked like. But we saved all trouble by driving over to his place, and observing the wire and the office at the other end.

Afterward we made the more intimate acquaintance of both gentlemen; and it was not without something akin to a smile that we noticed their open-mouthed astonishment and wonder as, while they were subsequently at our office, they saw us copy "actual dispatches" at the marvellous speed of, say, twenty words a minute, and they coming from the distance of perhaps fifty miles. We handed a "real, genuine telegraph dispatch" to them, at their request, (it was a railroad message referring to the movement of trains) to look at. It was the first one they had ever seen! and their sacred reverence for it bordered almost upon sublimity.

O. H. KAY.

Automatic Gas Lighting.

A new plan for lighting and extinguishing the street lamps by electricity has lately been tested by one of the London gas companies, with results which point to a still more extensive trial. The system is one in which electric currents are made to turn the gas on, light it, and subsequently turn it off. Although three operations are thus involved, the arrangement is remarkably simple. A single wire may be carried along a line of lamps and then connected with the earth, or the wire may be carried around through a circuit of lamps, so as to terminate at the station from which it started. At this station there would be a magneto-electric apparatus for generating the required currents, and one operator at this point would be able to command a number of circuits, each comprising any number of lamps up to 300 or more.

The experiments alluded to were made on the premises of the company, and have been published by *The Engineer*. A single line of wire, about half a mile long, was conveyed by a zigzag course along a series of twenty-three lamps. The wire was chiefly an aerial line, suspended to the lamp posts and attached to various intervening structures. It was insulated only at those points where it would otherwise come in contact with some conducting substance. The mechanism applied to each lamp, in addition to the wires, is contained in a small metallic box of circular form, so arranged as not to obstruct the light.

A socket is screwed on the top of the gas-pipe. Over this is a frame made hollow for the purpose of allowing the gas to flow up to the nipple at the summit. The gas is turned on or off by means of a valve or stop-cock. Two studs are borne on the upper part of a permanent horseshoe magnet, the latter being supported on the point of a fine pivot working in a cross-piece in the frame. This permanent magnet is capable of a reciprocating motion horizontally, and supposing its position to be reversed, the other stud would carry the pin or lever back through a short space. This shifting of the lever one way or the other serves to turn the gas either on or off, as may be desired. The movement of the magnet is effected by a change in the polarity of an electro-magnet, consisting of a soft iron wire in a coil. According as the current is sent forward or backward through the coil, so the polarity of the core is altered and the permanent magnet is turned on its pivot. The electric current is conveyed from the magneto-electric machine at the station by the wire which connects all the lamps. Supposing the current to be sent in such a direction as to turn the gas on, the next operation consists in transmitting along the wire a powerful discharge obtained from a condenser raised to an electro-motive power of several thousand volts or units by means of a Ruhmkorff coil. Around the primary coil is wound a secondary coil of fine wire and of much greater length. The discharge from the condenser has the effect of producing a secondary current along the wire, from the coil to burner, thereby developing a small spark just over the burner. The discharge which passes along the primary wire has the same effect simultaneously on the secondary wire in all the lamps of the circuit, so that the gas being previously turned on in the manner described, the whole of the lamps are lit. If the first and last lamps of the circuit are in sight of the station, the continuity of the circuit will be proved by the lighting of these two lamps. When it is required to extinguish the lights a reverse current is sent through the primary wire, causing the permanent magnet to turn and the gas to be shut off, as described above.

A Thought.

People despise each other too much. There is really some good in almost every one; something admirable in most. The stiff and solemn serious man may be a model of integrity and purity, though the gay Bohemian grins at him. The Bohemian, at whose approach the sober, solid man shudders, may really be warm-hearted, generous, and self-sacrificing, though many libations flush his face, and he seldom saves enough to buy himself the coffin for which he makes himself prematurely ready. The business man, whom others think a creature of dollars and cents, doubtless fought in his youth an Apollon of discouragement, and is secretly more tender-hearted and charitable than he dares let the world know. From this self-contained and unrefined person you often hear homely truths and honest sentiments. This elegant creature, who seems to live to be pampered, proves herself strong in time of need. Even those deep in the gulf of vice may not merit as much scorn as we give them. Who has held out the helping hand? Not we, who gather back our robes lest they should touch theirs. Did we not so deeply despise those of whom we disapprove, doubtless the shining examples that we are vain enough to fancy that we set them would do them more good. But one thing is certain: Whatever good impulses we are conscious of, exist in other bosoms. God did not make us in peculiar fashion. We suffer and rejoice, aspire and fall, as others do. The man who despises his fellow-man only scorns himself under different circumstances.

Dashes Here and There.

No less than eleven different patents for telephonic apparatus were taken out in England from November 20 last year to January 15th.

The French postal and telegraph services are to be united and placed under the directorship of M. Cocheris, a well-known writer on political economy.

EASILY DONE.—Dialogue between two \$30 a month men.

"Would, O would that I had fifty thousand a year. I know what I'd do."

"What?"

"Nothing."

M. Christiani, telegraph secretary in Berlin, from a consideration of the Bell telephone, has been led to employ the magneto-induction currents of a Hughes' Apparatus to put a second Hughes' at a distance into action. He found it possible to work with certainty through 120 kilometres of cable.

Louis Walsaman, "Child of America," entered the Albany telegraph office last week and paid \$20.41 for a telegram to the Emperor William, couched in these words: "I am the conqueror of the world—don't vote for the Pope." He was insane; and when he went round with a detective to get the money back he couldn't, as the dispatch had been sent.

BETTER THAN THE TELEPHONE.—"Pshaw!" said Grumpus, when he heard of telephonic machines enabling us to hear a man six hundred miles off. "The valuable invention would be one to enable us not to hear loud and vulgar chatter six inches off, in railway carriages and elsewhere, to say nothing of street cries in a suburban street, or your neighbor's piano in a suburban house. That would deserve gratitude, if you like."

THE TELEPHONE AND "ELECTRIC PEN" IN RUSSIA.—M. Sergins Kern reports in the *Chemical News* that the telephone is also the great novelty of the day in Russia, where several firms are selling them at \$5 a piece, a price which is considered there to be too high. M. Kern also states that the diffusion of Edison's electric pen is much checked by Government regulations, as the use of printing implements for private study is strictly forbidden in Russia.

At the exhibition of the telephone before the Queen, in England, January 14th, Miss Kate Field, the well-known vocalist, sang "Kathleen Mavourneen," "Coming through the Rye," and the "Cuckoo Song," then recited the epilogue of *As you like it*, all of which were distinctly heard by the royal party, and so well appreciated that the Queen thanked the singer personally through the telephone. At Southampton, which was afterward switched in circuit, a bugle call sounding the "Retreat," fell upon the hushed ears of the assembly like a distant echo, and produced a stirring impression. It is remarkable that, whereas for ordinary speech or music the ear requires to be close to the telephone in order to hear anything at all, the bugle note was heard by

every one present, though standing several yards from the receiving telephone. The Queen, through Sir Thomas Biddwell, has written Prof. Bell, expressing a wish to purchase the two telephones used on the above occasion. In reply, Prof. Bell asks permission to present Her Majesty with a set of telephones made expressly for her use.

A German paper gives a detailed description of the apparatus designed by Captain Bushholtz, of the Prussian railway regiment, and recently adopted in the German army, for providing telegraphic communication between the different fractions of an outpost line, or between the outposts and the main body of an army in the field. The whole apparatus consists of two small Morse's receiving instruments, a Siemens' and Halske battery, and a cable about three millimetres in diameter. It being impossible with a movable apparatus to use the earth to complete the electric circuit, a return wire is provided in the cable. An ingenious but extremely simple arrangement has also been devised for joining lengths of the cable together; the operation being rendered so simple that it can be performed by any one without any previous instructions or practice. The cable itself is manufactured in lengths of 500 metres, each being carried on a reel, which fits into a haversack in such a way that, as the man carrying it walks forward the wire unrolls itself behind him. The cable can therefore be laid as quickly as a man can walk. The receiving instrument is fitted in a small box, on the outside of which is the sending key and a bell. The weight of the box, which also contains a small galvanometer, is about 8 lbs., and it can be carried in front of a man by means of a strap across the shoulder. The battery is carried in another box, and consists of ten elements, the whole weighing about 22 lbs. It will act for months without the materials being renewed, all that is necessary to keep it in order being to add to it occasionally a few crystals of sulphate copper and a little water. The whole apparatus is to be carried in time of war on one of the wagons accompanying the battalion of infantry, and, when required for use, will be given to the men who are to employ it in exchange for their packs.

In another part of this paper will be found a contribution from Mr. Phillips touching the subject of telegrapher's paralysis. This is a topic which is of general interest to telegraphers, it being one about which every man who expects to follow the profession indefinitely must be more or less concerned. Mr. Phillips disavows any intention of prescribing an absolute remedy, but submits his suggestions more with a view to eliciting discussion than in the expectation that his hints will be adopted. We think, nevertheless, since he has obviously given the matter his thoughtful attention, that his paper will be read with profit, and we hope to hear from others on the same subject. Intelligent discussion of this new danger which seems to threaten those who have chosen telegraphy as a profession, may suggest a means of counteracting or remedying the evil, and with that object in view we should be glad to have the views, succinctly and briefly stated, of any who can throw light upon the subject. Mr. Phillips' suggestion in regard to changing our present alphabet will probably call forth much comment, pro and con.

A Complaint from the W. U. Lunch Room.

EDITOR OPERATOR.—Dear Sir:—Will you kindly permit me to call the attention of two of the gentlemen (?) guests of "our boarding house" to the fact that loud-mouthed, unrestrained profanity of the grossest order is highly out of place anywhere, but particularly so at the dining table. That to many of those compelled to listen to them their most brilliant sayings fall stale, flat, and unprofitable; and that when their meaningless twaddle comes forth loaded with oaths it is simply disgusting. The physical is in wonderful accord with the mental stature of these two GENTLEMEN (?) and we can only account for the vulgar noise they make by their intense anxiety lest they may be lost sight of altogether.

Yours, respectfully, NIGHT FORCE.

sensation here. As much as twenty-five cents was offered Saturday afternoon for a glimpse at it. I never saw such a demand for 'paper operators' before. 'Argus' is the most popular man in the business to day. All along the lines one hears the inquiry: 'Did you see the last issue of THE OPERATOR?'

PERSONALS.

Mr. Charles H. H. Cottrell was married in New Orleans on Tuesday last.

C. E. Bross, manager of Madison, Wis. office, was last week elected chief clerk of the Senate.

Mr. M. M. Bond, of the Western Union at Kansas City, Mo., was recently presented with a fine girl, weighing nine pounds.

Mr. Cushing, of 197 Broadway, this city, received 60 reds from Mr. Stewart on the Buffalo quad in 54 minutes one evening last week.

W. B. Summers, of Albert Lea, Minn., would like to know the address of Chas. P. Curtis, formerly of Poughkeepsie, N. Y. Can any of our readers inform him?

Mr. N. DeBree has resigned as general Superintendent of the I. O. Tel. Co. at Lake City, Florida. Mr. J. C. Redding, assistant superintendent is his successor.

Charles E. Ferguson, operator at dispatcher's office, N. Y. C. and H. R. R. R., West Albany, has accepted the position of agent and operator at Tribes Hill, N. Y.

Mr. P. Helmer, asst. train dispatcher, C. & N. W. R'y, Clinton, Iowa, will act as agent for THE OPERATOR, "Lightning Flashes," "Oakum Pickings," etc., at that point, *viz* Mr. Tracy Barnes.

Miss Millie M. Newland is the efficient manager at Brentwood, Tenn., N. & D. division of L. & N. & G. S. Ry. Miss Newland is a first-class operator, and does business in excellent style.

Mr. Jas. Morris has returned to Cave City, Ky., after a two month's absence visiting relatives. Mr. O. F. Cortwell, who has been subbing at Cave City, is now on the retired list waiting for something to turn up. He is first-class, and signs "Co."

Pete Carson of Milwaukee, has accepted a position with the Board of Trade Company, at Chicago. On the evening of his departure a number of his Milwaukee friends presented him with a new traveling satchel, and escorted him to the depot.

Professor C. H. Haskins explained the telephone to a large audience in the Assembly Chamber at Madison, Wis., February 8th. The lecture took the form of a familiar talk, and proved very interesting and satisfactory, while the tests of the unique instrument exacted alternate wonder and merriment.

We regret to learn that Mr. Tracy Barnes of Clinton, Iowa, is compelled by ill health to take a three months' vacation. He goes to California. Mr. Barnes has overtaxed his energies by eight years of continuous service, and is suffering from general prostration. We hope that with rest and change of air and scene he will speedily regain his pristine health and vigor.

Miss Annie S. Barnum, of Danbury, Conn., whose father is cousin of the well-known P. T., spent a few days in the city week before last. She was escorted through the Western Union building, including a view of the operating room from the top of the switch-board, and a visit through the elaborately furnished executive offices. Through the kindness of Mr. Ralph W. Pope, she had also an opportunity of speaking through one of the Gold and Stock telephones.

I. and M. DIV. CHICAGO M. and ST. P. R. R.—At McGregor, Iowa, Mr. Jones is day man, and Mr. Keyes, owl. Scottie Derrick and S. Killen are at Calmar, W. C. Lacy and L. Brodgate at Cresco, Jimmy Foster and Mr. Collins at LeRou, and Mr. Beecher at Austin. J. S. Ryan is train dispatcher at Minneapolis, with Messrs. Stewart and Keefe, assistants.

The operators and others on the eastern division of the Erie Railway have presented a very handsome and costly water service as "a slight expression of their continued affection and remembrance" to Mr. W. G. Bronson, formerly train dispatcher and division operator, who left the division for a larger field of labor about a year ago. Mr. Bronson was exceedingly popular with his subordinates on the Eastern division, and may well feel proud of the beautiful present, and of the feelings of esteem which prompted it.

MICHIGAN AIR LINE.—C. L. Stoddard works days, G. T. R'y, Ridgeway terminus of Air Line. C. E. Dutton is "owl." E. F. Sibley, an old timer, is at Armada. Romeo City office is dignified by the presence of Miss M. E. Thompson, the only lady operator on this line. P. H. Casey, at depot, does double duty as auditor and train dispatcher; C. A. Fatin and H. S. Davis are at Almont.

SYRACUSE.—Mr. Charles Lincoln has succeeded Bidwell E. Runyan as manager of the N. Y. C. and H. R. R. depot office. Mr. J. D. Decker is his assistant, and Miss Emma Eager officiates nights. Eugene House, Miss Fannie Hewittson, and Miss Hattie A. Pitney manages the Syracuse office. Miss Minnie Blackhall is at master machanic's office. Miss Ida R. Travis, J. A. Cooper, Miss Mollie Tobin, and Mrs. Maggie McKay, Miss Maggie Lynch and Chas. S. Woodworth are at East Syracuse.

P. R. R., PITTSBURG DIV.—At Superintendent's office, Union Depot, Pittsburg, Messrs. Norris, White and Thompson are the train dispatchers, and Jno. Suter, chief operator. The operating force consists of Messrs. Hamilton, Weaver, McBrarity, Watterson, Byers, Tucker, McCoy, Shook and Miss L. A. Slack. At Lawrenceville we have J. J. Stanley and Miss Donald; Shadyside Tower, Miss E. Slack and Miss Gordon; East Liberty, E. S. Cuthbert and L. Maguire; Wilkinsburg Tower, J. Cummings and George Orr; Hawkins Tower, F. Finley and Miss Witherspoon; Brinton's, Miss Anderson and J. W. Hare; Wall's Tower, Miss E. Hugo and George Hugo; Carpenter Tower, Miss J. Sarver and J. Rambo; Irwin's, H. B. Hammond and W. Martin; Penn. J. B. Welty and H. A. Hawk; Rodebough Tower, E. B. Klingensmith and F. P. Marsh; Southwest Junction Tower, C. A. Metinger and Miss M. J. McKelvey; Carney's Tower, S. W. Geary and A. P. Weaver.

LOUISVILLE, KY., ITEMS.—Our main office is situated on the corner of Third Avenue and Main Street, the operating room being on the fourth floor. There are in office thirty-two instruments, two sets quadruplex, and two sets duplex. Mr. Charles Smith is manager. The day force consists of George A. Netherland, chief; Brown Hicks, assistant chief. Jas. Watts works the Cincinnati quad. Johnnie Hust, brunette, and the handsomest man in the office, manipulates the quad to New Orleans and Memphis. Zeph Morris, the oldest operator in the room, handles the Chicago and Indianapolis wires. E. L. Mann comes on at ten a.m. Jo. Gilkeson looks after the Montgomery and Nashville lines. J. N. Faulkner is report man, and W. S. White keeps an eye on Danville, Lexington and Frankfort wires, and worries with the boys on the city lines. The night force is composed of George J. Golding, chief. Bob Furr works the Cincinnati quad. Eddy Mann looks after New Orleans till ten p.m. Ed Fisher practices law during the day, and handles the wires to Montgomery and Nashville, nights. C. R. Evie whoops 'em up to Chicago and Indianapolis. Jack Sinclair is night report man, and makes the prettiest copy in the office. We have four branch offices. Jimmy Fitzhugh, at the Bourbon Stockyards, D. J. Shiver at the Galt House, Billy Applegate and Harry Donnelly at "J," corner Fourth and Jefferson, Met and Ed. Buckner at the Louisville Hotel. George J. Laudrum is our line repairer.

MARRIAGES.

SCALES—WRISTON.—February 13, at Charlotte, N. C., by the Rev. A. A. Boshamer, Mr. J. L. Scales, of the Western Union office, to Miss V. Addie Wriston.

CURL—BROWN.—February 10, by the Rev. E. E. Sibole, Mr. E. Butler Curl, agent and operator at Pennington, N. J., to Miss C. Marion Brown, of Philadelphia.

All Persons sending for

Catalogues or ordering articles advertised in our columns will do us and our Advertisers both a great favor by mentioning that they saw the Advertisement in

"THE OPERATOR."

The article in last issue criticising the Chicago Western Union management seems to have created quite a stir in the Garden City. A correspondent says, "The 'Argus' letter has caused a profound

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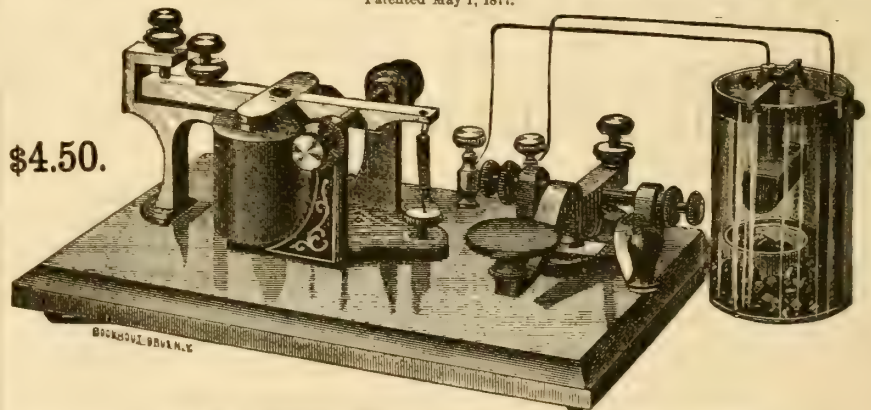
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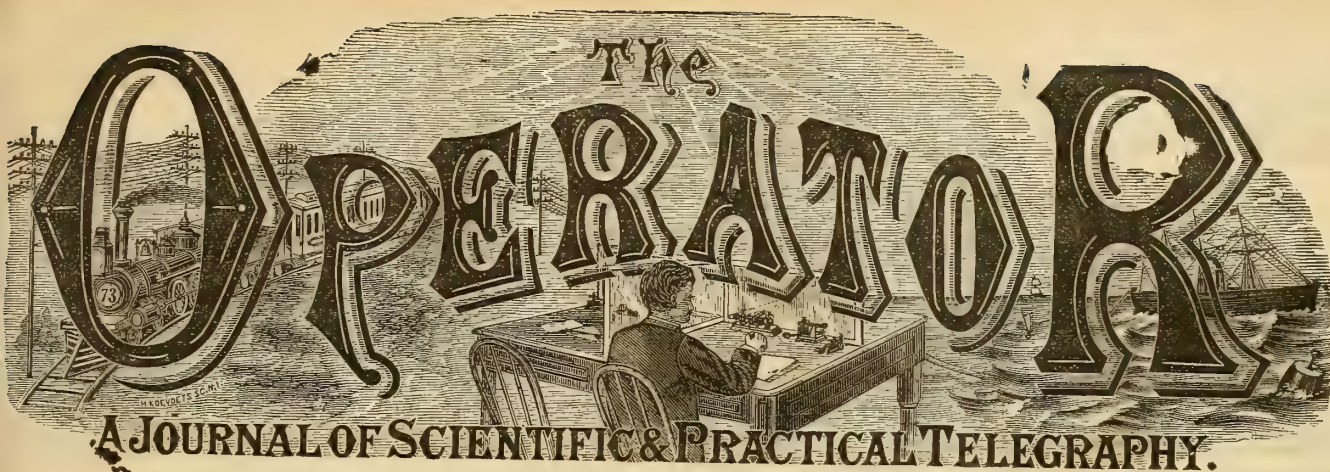
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VOL. IX.

NEW YORK, MARCH 15, 1878.

No. 6

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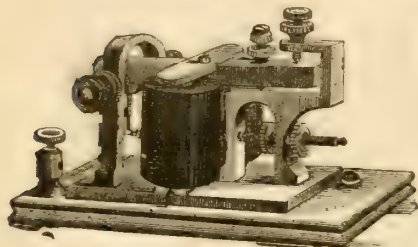
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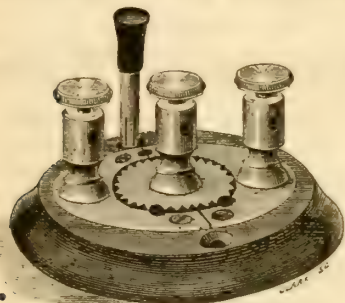
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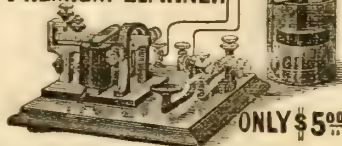
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Thorough experiments have shown that it does not suffer injury by the most destructive insects of land or water.

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February 12, 1877, he writes further, "This piece of Kerite wire, unprotected by any covering whatever, was in the tunnel under the river in Chicago from Sept. 1869 until December, 1876, and shows no signs of decay or deterioration in its insulating qualities."

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Mr. M. A. HARDY says: "I have used it not only in this country, but also in Egypt, where it was subjected without injury, to the most severe treatment. * * * I also had the Kerite cable for several months in the Mediterranean Sea, and always found it reliable and unaffected by the ravages of 'teredo.'"

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THE OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY

March 15th, 1878.

Volume IX.

Whole No. 98.

The Plug.

There's a plug, but I'll not tell you where,
His *biz* in a "College" he learned;
So full of sharp wisdom he is,
The system he's quite overturned,

He mixes his *h* and his *p*;
His *l* and his *r* are both one.
His *c* and his *r* he'll transpose,
And *6* is for *aye* overdone.

He tells us the river is *ton*,
And speaks of a "bull" as a *bum*.
To *pell* he consigns all his foes—
The hull of a ship is her *hum*.

A ham is quite likely a *hall*;
A barrel of meat is but *meal*;
His morning salute is *godam*—
He swears at the *cuachine* and *heal*.

A *rat* he can change to a *cat*.
He says he has *sorns* on his *fool*.
We know that he must be correct—
He learned in an excellent school.

We always excuse his *x q's*;
We laugh at his *sung* when its *lung*;
We shake when he calls us a *ponnd*,
And smile as he tells who was *ping*.

If *ice* he should write 't would be *yo*.
A message from Erie's from *oye*.
If down on the Hudson he lived,
He'd tell of the river at *Boy*.

Dubuque is a word he forgoes;
Des Moines is his master for *aye*,
And Schaghticoke surely would bring
The saltiest of tears to his *eye*.

Whenever he's *sold* he is *cold*;
And *iron* he changes to *corn*.
These fellows by "Colleges" taught
Are *BULLY*, as sure as you're born.
—C. C. Hashins in *The Telegrapher*.

Telegraphers' Paralysis and the Phillips Alphabet.

It is useless to look for a remedy for operators' paralysis in the direction that Mr. Phillips suggests. I believe that the only cure is relaxation. The late eminent Dr. Hall, of New York, and most medical men of skill, hold the same opinion. Let the company follow the example of the English authorities by making eight hours a working day, and giving the day operators two and the night operators three weeks' leave of absence every year with pay. A friend of mine who has worked ten years under the English system says that this method has proved so much of a preventative that not a single case has ever come under his notice in that country. This dreadful malady is more widespread than most people imagine. Almost every other operator is afflicted with it in a more or less degree. Only a week or two ago the manager of one of our largest branch offices was stricken down with it, so that his right arm is now almost completely useless. Like Mr. Phillips' Nathaniel Hawthorne, even an attempt to write his own name gives him an acute sensation of pain. I myself also feel symptoms of the insidious disease. When I attempt to send fast the forefinger of my right hand drops down as useless as a lump of lead. It behooves operators, therefore, to bestir themselves, and agitate to obtain the eight hour system and annual leave of absence. If Mr. Phillips has really the interests of the profession at heart, as he says he has, let him set a good example by extending this privilege to those under him, and using his pen and influence to secure the same blessed boon to the whole telegraphic community all over the country.

BLUES-TONE.

PHILADELPHIA, March, 4.

We are once more called upon to express our opinion for or against a new telegraphic alphabet, presented this time by Mr. Walter P. Phillips. The first question that suggests itself is whether or not a change of alphabet is judicious or advisable. This question was discussed in an exhaustive manner a few years ago in the *Journal*; but the conclusion then reached was that a change was not advisable. But the reason for this conclusion was that no alphabet superior to the Morse had been offered as a substitute for it.

What gave rise to the discussion at that time was the realization that the Morse alphabet was not only susceptible of improvement, but that it was full of imperfections, attributable mainly to the spaced letters. The combinations that can be formed by the Morse characters are so various and misleading, that errors, serious as well as ridiculous, accumulate so rapidly in the offices of managers and superintendents, that special clerks are employed to investigate and "father" them. There is more truth in the stereotyped excuse, "he sent it that way," than is generally acknowledged; and if it were not well understood that the fault lies in the Morse alphabet as much as in the operator, we may be sure that many would receive their "ticket of leave" where they now escape with a reprimand.

To say that we are incapable of meeting this difficulty is to cast a reproach upon our intelligence; but a little reflection and perseverance in the wide field of experiment will soon convince the most skeptical operators in the service that a change is not only possible but desirable. It is hard to part with that which we love, and we seldom do it without a struggle; but if the "nerve" of the profession is at stake, we should resign ourselves as gracefully as we can to what must be regarded as a necessity. A faster or more musical alphabet than the Morse can not be devised; indeed it is frequently sent too fast for safety or comfort; and while we may yet prefer it to any other, we should not close our ears to experiment in other directions. Mr. Phillips' idea of substituting Morse figures for the spaced letters, and supplying new figures in their places, is unique and original. We are not asked to learn an entirely new system, or to exorcise the good features of the Morse, but simply to accommodate ourselves to a re-arrangement of things, for the most part already existing.

The Morse alphabet presents two grave objections: first, the nervous strain to the operators resulting from the use of dotted letters; second, the errors due to the spaced letters. An alphabet composed of dots not exceeding in number the characters of Morse would be a very rapid one, but the use of such an alphabet would destroy the "grip" of an operator in an incredibly short time, owing to the fact that a greater number of muscular movements could be made in a given time; as it must be patent to the most obtuse that a mile walked in eight minutes would use a man up, when the same distance walked in fifteen minutes would cause no inconvenience whatever. Satisfied that the new alphabet is less wearing to the operator, the next question to be considered is the rapidity of transmission. Investigation demonstrates that the difference between the two alphabets in this respect is so inconsiderable as to be of no moment.

Analysis shows the substitution by Mr. Phillips of fourteen dashes for seventeen dots; and while practical telegraphy evidences but a slight difference in time between the dot and dash in rapid sending, there is a clear gain of three characters in the new alphabet, which should place it on an equal footing with Morse in point of time. Last, if not least, of the virtues of the new system is the incapacity for mistakes which it exhibits, the spaces being entirely supplanted by dashes, which obviates the necessity for error while no decrease of speed results. SILEX.

Since my previous contribution was written, suggestions have been elicited (owing to our partial use of the new alphabet on the Associated Press wire, where we have demonstrated the feasibility of its ultimate adoption) from two gentlemen connected with our service; one who is a first class Bain as well as Morse operator, recommending the alphabet which he was originally taught, while the other, who is a Continental and Morse expert, is in favor of the code which he learned in "Merrie England." To the latter, who put his suggestion on the ground that uniformity of signals, the world over, would be secured by the adoption of the Continental alphabet, and who claimed that it would compass the end I had in view, I have responded as per the appended. The letter is furnished, since it contains considerable of an explanatory nature, and places my suggestions before the readers of

THE OPERATOR in a somewhat clearer light than they appear in my former communication.

MY DEAR — : I mean you no injustice in saying that I attribute your preference for the Continental alphabet to your previous use of it. To me, as a Morse operator who has never worked Continental, and who probably never will, however, it is full of objections. To begin with, it seems to me that any change involving a transposition of letters would prove a dangerous and annoying experiment. This, according to my rather imperfect recollection of the English alphabet, is one of the sequences which its adoption would contemplate. For C you give the Morse J, for F the Morse Q, while the Morse F does duty as R.

"My preference, past, present, and for all time, is for Morse. It is musical, rapid, and in many respects, altogether admirable. Moreover, I have never experienced any marked trouble in receiving it from senders, good, bad or indifferent. But we are confronted with a malady which has appeared in a somewhat problematical shape, and which there is some reason to believe is due to a prolonged strain upon the nerves. We have, at the same time, some reason for thinking that a dash gives a rest to the hand which a space does not. Now, while it seems to me there is wisdom in experimenting with an alphabet which continues to be Morse in at least one-half of all English words, and which remains, in a great measure, after the changes suggested by me are made, the one which has become as much a part of every American operator's being as the language which he speaks, a change of the other kind would be troublesome and perplexing.

"In order to make the changes which I have suggested, we do not transpose any letters whatsoever, and the confusion which would result in my own head as a consequence of trying to use the Continental, I do not apprehend in a change to my own alphabet. For C I give the figure 5; for H a figure 1 is substituted, etc. The occurrence of these characters which have for so many years rated as figures in our minds will not confuse as the substitution of X for L, and so on would do. Again, my alphabet accomplishes what it aims to—the obviation of using letters composed exclusively of dots, beyond three in number. The Continental H, as you know, has four dots. Moreover, my alphabet is shorter than the one you recommend. There are only seventy-nine dots and dashes in it, as against eighty-three in the Continental. Even my numerals, which I have regarded as my weak point, have only thirty-eight dots and dashes as against forty-two in the English.

"To sum up, therefore, I come forward with seven changes in the alphabet, four in the figures, and two in punctuation—thirteen in all—and I offer a code containing seventy-nine dots and dashes, with a list of figures containing thirty-eight—one hundred and seventeen in all—against one hundred and twenty-five in your Continental alphabet, while the latter involves not only twenty-three changes against my thirteen, but several transpositions as well, which are much harder to master. The Bain alphabet, which has also been recommended by those who have learned it, will not stand the test with any better results, for it has both the four dot and five dot characters, and abounds quite as liberally in transpositions as the Continental.

"Recurring to the Morse alphabet, against which I have no spark of animosity, except so far as it may be demonstrated that its use promotes disability and liability to error, I have to say that my alphabet requires only two more movements, and my numerals the same number as Morse, and if we count the spaces in the Morse, C, O, R, Y, and Z, each of which require as much time as a dash, my alphabet is shorter than the Morse by three movements. The Continental alphabet and figures require seven more, and the Bain twelve more movements. Besides, I have only disturbed the Morse punctuation in two instances, while both Bain and Continental depart almost wholly from the Morse code. In both cases I have substituted what will phonetically suggest the stop indicated, viz: XN for exclamation, and PF for a paragraph mark.

"If, in view of the above showing, you can make it apparent that American operators have any ground for adopting the Continental, except the untenable one of being in unison with the rest of mankind, or can apprise me wherein my alphabet is not more practicable and as safe as the Continental, I shall feel under obligations. I say the 'untenable ground,' because, as I believe, having been the pioneers in electrical discovery, and the leaders in the practical development of telegraphic machinery of all kinds, it would not become us as a people to

adopt the methods of those who follow rather than lead us, particularly since it is demonstrable that there is something better and more easily acquired to be had, if any change is to be made."

In addition to the above, I would say, that for quadruplexes or for single circuits over which the signals come uncertainly, from bad weather or other causes, I think I see some advantages in my alphabet which are not apparent in the Morse. I recall that the only time in my life when I was mulcted for tolls, it was the letter C which wrecked me. I received a red message from Mr. Drake—a beautiful sender—then working the Chicago end of the New York duplex, on which I subsequently refunded a dollar and seventy-nine cents. The telegram as sent, read: "Forward one hundred barrels of C sugar," etc. The C came to me in a manner suggestive of a wagon turning a corner on three wheels at a two forty gait. I glanced over to the sending side. Mr. —, a gentleman the dream of whose life it was, as he often said, to send sixty messages in an hour, was again attempting that achievement. I had not the heart to break and obstruct his progress for a second, so I quickly decided that the letter I had lost was a B which had gone to pieces *en route* and inserted it. One hundred barrels of B sugar were sent to Chicago as a consequence, and much gnashing of teeth resulted, with a demand for damages, which, fortunately for me, were limited in amount by the conditions printed on the blank. I have, I admit, been tardy in making my acknowledgements, but at this late day I kiss my hand to the gentleman who invented that clause limiting damages for errors in half rate messages. I don't know who he was—possibly his name was Smith—but whether it was Smith, Brown, Jones, or Hopkins, I improve this opportunity to say to him in the words of dear old Rip Vanwinkle: "Here's to your good health and your family's good health, and may you live long and prosper."

The inability of inferior operators to make C's, R's, O's and Y's, and their peculiarities, such as rendering to-morrow "timissiw," is another significant fact. And even when the spaced letters are correctly made, there is always more or less doubt in the average operator's mind whether "that word back there" was "eye," "rye," "erie," or "rice," and the question is generally decided by the context rather than by any acoustic process. The steamer Iona is usually referred to in the press dispatches, as printed in the country papers, as the steamer *Cena*, and Mr. Burdick, of *Cena*, recently figured in the Congressional reports, as presented to newspaper readers in a thriving New England city. The young man from the country continues to receive telegrams for Dr. Bacid, Prospect Street, and surprises a downtown vender of patent medicines occasionally with an order for *sophatye* pills, and at intervals startles a Wall Street man with a telegraphic call for "a meeting of the *baftid*." Even as well known a gentleman as Mr. Goblright appeared not long since under the pseudonym of "Gobeyght," while it was to be inferred from a Brooklyn telegram last winter that a gentleman prominently connected with New England newspaper interests was detained "on account of fog and *go* in the river." *Kristone Zining* Machine Co., for whom messages were abundant two or three years ago, was popularly supposed to be a German firm, until the telegrams reached Philadelphia, where Keystone is one of the words which the average citizen rolls around his tongue with ecstatic relish, and the sewing machine is his soul's ideal of the poetry of mechanism. The unsophisticated gentleman who put freeze and froze, with twelve words between them, in his stock ticker, had a busy time of it trying to keep track of the fluctuations in Western Union.

Words as dissimilar, perhaps, in their meaning, as any in the language are in two instances precisely the same in the Morse characters. I read not long since in a metropolitan paper's telegraphic report of the legislative proceedings at Albany, that "Mr. Spinola said he regarded his appointee as a most proper *poison*." But as suicide was not the object contemplated, while the filling of some petty office was, it is fair to assume that "a most proper person" was meant. Within a fortnight I have seen in a San Francisco paper the paradoxical statement, that "though modest and comparatively unknown, the deceased was *prominently* a philanthropist." Of course "pre-eminently" was originally transmitted.

The foregoing, and hundreds of other quagmires into which the American operator would fall almost every day but for the fact that he is, as a rule, quick-witted, alert, and suspicious, and the circumstance that the dullards are constantly being entrapped, serve as an argument which is not in need of elaboration at my hands.

It occurs to me, also, that a large percentage of good operators make bad work of the letter P and figure 6. One of the fastest and most famous senders of the time invariably sends P as "si" or "is," while many experts who start out with the honorable intention of making a 6, yield a supply of dots varying from seven to ten. These circumstances seem to indicate that dots in fixed numbers are difficult to make even by trained men. I have no recollection of a beginner who failed to make a plain G, K, or other letter in which dashes predominated. Any one who will stop to think about it will agree with me, I believe, in saying that a sender's status is generally fixed by his ability to make even dots in exact numbers. A poor operator seldom advertises his infirmities on the dashed letters. It is when his H's, P's, and G's come staggering in, with the opening and closing dots light, and the middle ones in a chronic state of bulge, and his C's, O's, R's, Y's and Z's guiltless of space, that he is entered upon our mental memorandum as "a plume."

That cheerful denizen of Washington County, New York, who dated his messages "Handy Pill," and whose exuberance of spirits expressed itself by his addressing those with whom he worked, irrespective of sex, as "Papa," has a reputation wherever Morse is written, and men have been persuaded to believe again that

"The ambitious youth who fired the Ephesian dome
Outlives in fame the pious fool who reared it."

The "ambitious youth" whose engaging request at unseasonable hours to "fractice wiip me" annoyed the busy gentlemen of the Albany office, in bygone years, gave to "Handy Pill" a fame wider and more lasting than will ever be vouchsafed to the worthy Teuton who founded the settlement and called it Sandy Hill, but whose name was long since forgotten of man.

Very respectfully yours, WALTER P. PHILLIPS.
MARCH 4th. 1878.

O, Weep for "Argus"—He is Dead!

"Not all to that bright station dared to climb;
And happier they, their happiness who knew,
Whose tapers yet burn through that night of time
In which suns perished; others more sublime
Struck by the envious wrath of man or God,
Have sunk extinct in their refulgent prime;
And some yet live, treading the thorny road,
Which leads through toil and hate to Fame's serene
abode."

There is current a report that "Argus" was killed by "Mercury, a messenger of the gods, the inventory of letters, and the god of eloquence, merchants, and thieves." There is yet, however, plenty of room for speculation upon the truth of the report, as results of *post mortem* inquiries have not yet been placed in a satisfactory light.

The "Argus" *expose* arrived, was read and commented upon freely or cautiously, according to the discretion or position of the reader. In the organisms of a few it assumed the shocking character of a personal earthquake. In the minds of others, no less biased, perhaps, it was read as a matter of course, "more truth than poetry," "a disappointed aspirant," "one of the victims of a spiteful managerial conceit," "a sorehead," etc.

Were the "Argus" letter as a whole beyond question, there would of course be only one side. Presuming, however, that it is within the limits of questioning, there must be two sides; therefore the writer of this letter proposes to consider and remark upon both.

It is sometimes necessary to "be cruel to be kind." When officials, or an association of officials, settle into the belief that they dwell within a charmed circle, "knowing no enemies," or, knowing them, are deluded into fancying that any exclusive or virtuously painted coat of mail can protect them from all criticising eyes, ears, and words of mouth, they are at once enveloped in an atmosphere unhealthy and dangerous—an ease full of temptations and honied deceptions—a dream, wooing the senses to such a degree, that an awakening can only be accomplished, as it were, by "a peal of thunder from a cloudless sky." To be sure, there are those of elevated position who early learn and ever feel that the best assurance of success is to be, at proper times, earnestly wakeful and conscientiously workful, and that "to be strictly just is to be truly great."

We have with us (officially) at least, one, (we trust many more), of those noblemen. We call him "the General," and I would that such men were more generally distributed throughout the official world.

Referring to "The Biographer's" reply to "Argus," the writer would say, in the latter's behalf, that, had "The Biographer" paused in thoughtful

meditation upon his "peculiar relations" with the management, and also with the operators, he must have been less vehement in the choice of his epithets. In the original manuscript of the "Argus" letter, the sentence as printed, "I would not this day occupy the position he does," read, "I would not this day be allowed standing-room in an aisle." The change was made through mistaken kindness of the editor. The self recommendations of "strict attention to business, being sober, reliable, and honest," should be placarded on his chair while he sleeps and dreams of "detained fifteen minutes after six by stopping to catch a thief!"

The statements of "the biographer" appear to prove that the responsibilities for "quad" failures or successes may be shifted indefinitely. Even the "Jones quad" may be proven a child of doubtful parentage—what does Dr. Nicholls think about it? B's statements also prove the magnanimity of the assistant manager in appointing an enemy to a chiefship in preference to acquiescing in a single choice of Mgr. Springer's, and also to the exclusion of a faithful, longing friend—his "biographer." Alas, too! there is another proof of the fallacy of relying upon prospective favors which have been paid for in the coin of unmeaning praise.

When a man uses his official prestige or power to protect him in questionable practices, and attempts—either intentionally, thoughtlessly, heartlessly, or ignorantly—to damage the fair prospects, naues, and self-respect of others, an opponent should be granted a moral right to meet him with the most effective and easy to be substantiated arguments applicable to the case; and, if need be, under the protection of a *nom de plume*.

Had "Biographer" some time ago whispered in the ear of his friend his failings, deficiencies, and faults, taking the risk of wounding his feelings, and causing him to revolt under the discipline, he (Biographer), might have conferred upon his friend an invaluable blessing, and—received for his pains a rebuke only to be compared to the swiftness of a Japanese execution. Instead, however, he flattered, and publicly committed him to dangle smilingly and blandly upon a pinnacle from which an angel would have fallen. Moral: rather put your trust in a wise enemy than an indiscreet friend.

Should the matter come to the publishing of names and affidavits, the writers will not be withheld. However, he would take occasion here to remark that the result might be demoralizing disclosures in pretentious places, pregnant more of ill than of good. For the sake of the honor left in our calling, therefore, and of "order, that first law of heaven," the "stirring up" process should not be carried too far.

Contrary to "The Biographer's" assertion, the appointees were *all* "regular or irregular" attendants upon the "quad class," and for a longer or shorter time members of the "Electrical Society." "The Biographer's" wild inaccuracies—in mercy to those he seeks to defend—should be ample cause for his extinguishment.

One of the causes for ill feeling here has arisen from an apparent disposition on the part of one or another in authority, to "kick a man after he is down," to single out some individual between whom and the official there may or may not exist a mutual antipathy, and for some trivial offence, or accidental omission inflict upon the erring brother a punishment unjust and humiliating in the extreme, and out of all proportion to the transgression. Such persecution (not infrequent), upon honest, sober, striving-to-do-well men, when a little judicious and wise counsel from a kind spirit and nobility of soul, would have set the wayward one right—have made enemies to the management, even among those who have felt most disposed to be friendly. In all large offices there are, of course, cases of wilful insubordination and chronic delinquencies that require prompt and severe correction. To such cases the above remarks do not refer.

It is the purpose of the writer to suggest reforms and the righting of wrongs, so far as possible, without the necessity of publicly particularizing. Where there are so many employed there will always be a few irrepressible malcontents, whose morbid sense of liberty will not permit them to fairly acknowledge any rules of discipline, of order, or of business. They are ever on the alert to force a point against the management, and in all cases espouse the side opposed to it. Others, respectable and industrious, recognize their plain duties, and endeavor to pursue them in peace. The former should remember that while they are installed and paid for the use of their abilities, they owe their employers and themselves a strict and honest performance thereof, and also a faithful observance of all rules

posted for their guidance. It is in the nature of men in general, and operators in particular, to covet a liberty beyond their reach, and to set a value upon it which they may not realize in its possession. If their enforced confinement be galling and sometimes aggravated by a harsh oppressor, they should only strive the more for a free competence, and remember that "it is the glory of a man to pass by an offense." True, there are certain galling offenses that cannot be readily passed by, particularly those that flagrantly interfere with "the greatest good to the greatest number." Operators one and all should not forget that those directly over them in authority may enjoy less of real liberty than they themselves. That they (the chiefs, managers, or superintendents), are thrice servants—servants of a sovereign power above them, servants of their fame, fair or otherwise, and servants of business. They have "sought power to lose liberty," and in too many cases in seeking power over others, have lost power over themselves. The official's responsibilities are many, and his standing slippery, and although he may have sometimes proven unequal to his task, you, reader—had you been in his place—might have been beset with difficulties equally as perplexing. Therefore be charitable, and above all, do not be envious. Let all scrupulously examine themselves, and try whether their principles are really correct or not." No man is easily convinced of his faults by the accusations of another. If a man find that in some particular places in his career he has shown a heart that was selfish or wanton, a temper that was revengeful or unkind, a spirit that was jealous or envious, or malicious, a self conceit that was unpleasant, or a positiveness that required others to acknowledge his infallibility, he should then think more tenderly of the failings of others, observe the golden rule and amend.

"A place showeth the man, and it showeth some to the better, and some to the worse." "It is an assured sign of a worthy and generous spirit whom honor amends, for honor is, or should be, the place of virtue."

The writer believes that it is within the power and province of every official and subordinate here to unite themselves in a firm bond of sympathy and well doing. We are all working for the same end, and all cherishing objects in common—the obtaining of our daily bread, just rights, and the pursuit of as much happiness as may be in our way. Although the declaration may surprise some, the writer would hesitate long before voting for the deposition of a single member of the official corps of Chicago—providing they all evince a disposition to act impartially, gentlemanly, and squarely.

Setting aside the past, and all "crookedness," intentional or accidental, he is willing to accord to Mr. F. W. Jones the eulogy of being a young man of unusually thorough attainments in the science he has chosen, and who, being energetic and in good health, can hardly fail to render the company long and excellent service. His executive knowledge and his duties as between man and man, will extend and enlarge until, let us hope, there will be few to dispute his claims as one of the representative telegraphers of America.

To Mr. H. C. Maynard the writer would not accord less than above, except, perhaps, that he has not devoted quite as much time to the study of "the science," yet, he is "well up," and having earnestly done his duty here the most of his life, he should continue without interruption to honorably enjoy the fruits of his labors.

The District Supt. has been connected with the telegraph business—mostly in an official capacity—since its infancy. He has a good reputation to sustain, and his friends will not readily believe that he has run any risks of forfeitures by intentional misconduct toward those either above or below him, or that he has a mind to cling to false or doubtful positions as unquestionable maxims, or to humor by being triflingly busy. His vast experience should be a sufficient guarantee of the value of his work, and the soundness of his judgment.

In his next, if allowable, the writer would offer operators a little gratuitous plain talk in regard to their present and future.

CHICAGO, March, 1874.

SOME of the English scientific men are disposed to do with the telephone as they did with the telegraph—claim it as an English invention. Mr. W. H. Preece, C. E., has just delivered a lecture before the Royal Institution, in which he finds that the telephone was "shadowed forth" by Hooke in 1667, and "practically applied" by Wheatstone in 1819.

Severe Discipline in the Chicago Office.

SCENE 1.

"It was a night as calm and still
As ever blush'd on wave or bower,
Smiling from heaven, as if naught ill
Could happen in so sweet an hour."

—Moore.

The time was 1.20 A. M. Having sent "30," and seeing a number of operators idle in the room, one of the night men of many years' service in the Chicago office, and a gentleman of excellent character and much culture, asked the late night manager if he might go home. The latter replied that he could not let him go till two o'clock. Five minutes before that time, to permit of catching a car, the request was repeated. To this the autocratic night manager haughtily and petulantly replied:

"I can't let you go."

"I have sent '30' half an hour ago," suggested the vassal, "and have done nothing since."

"Who's running this office?" indignantly demanded the autocrat.

"You are trying to," curtly replied the other.

"I suspend you, sir! Get out of this office!" thundered the autocrat.

But it is almost needless to say that the vassal resolutely refused to "get." Thereupon the autocrat rushed to call one of the Mellican District police. Presently one of these representatives of the majesty of the law appeared upon the scene, and the autocrat, striking a tragic attitude, and pointing his authoritative finger in the direction of the vassal, exclaimed:

"Eject that man from the office."

Now, it so happens that the vassal who had thus dared to "beard the lion in his den" is quite familiar, as a reporter, with the duties of a policeman, and particularly the "Mellican District" policeman, so he intelligently defined that gentleman's duties in the premises, and the curtain goes down with a scene in the distance—Mr. Policeman going down stairs alone.

SCENE 2.

The curtain rises on the morrow, and we observe Manager (?) Maynard on the stage, costumed a *la* Othello, holding a scroll in his hand on which appear the words, "Honored Sir" at the top foldings, and "I have the honor to be, sir, your most humble and obedient servant, L. N. M." at the concluding folds; all of which is a voluminous statement relative to last night's vindication of official dignity. Presently the vassal appears before the Manager (?) and presents his cause. When that official has cleared his throat, and assumed an air of great composure, he says:

"I'll have to refer this to Col. Wilson," and the vassal makes his exit to await the verdict of the Star Chamber.

SCENE 3.

"If I'm destined your lordling's slave,
By nature's law designed,
Why was an independent wish
Ere planted in my mind?"

—Burns.

The operating room. "The representative (?) telegrapher of the northwest," the man who "knows no enemies," seated upon his elevated throne, every lineament of his countenance plainly saying, "I am monarch of all I survey." An operator, crouched in his humble chair, diligently manipulating the mystic key on a certain way wire. Presently every look is as clear as the good name his mother gave him. Then he rises slowly and cautiously from his humble chair, but alas! the "argus" eyes of "the representative man" are upon him. He recklessly approaches the window and gazes longingly from his prison house. Suddenly a hand is laid gently upon his shoulder, and turning he meets the innocent face of a page who blandly informs him that "the king" desires his presence near the throne. With measured steps he approaches the august personage. "In leaving your table, sir, you have violated a rule of this office, for which I suspend you," remarked the "representative man." The poor unfortunate departs for his home, only to darken its sunshine by a recitation of his wrongs.

SCENE 4.

The Manager's (?) office. Mr. Maynard, with all the gravity of an executioner, awaits the coming of the vassal who had presumed to look out of a window. The offender, mentally superior to his judge, appears for the farcical trial. "What defense have you to make to this heinous crime?" gravely inquires the judge. The accused explained the facts as related above. "I find," remarked the judge,

"that you are a man who thinks too much. Like Cassius, you read much; are a great observer, and look quite through the deeds of men; you sow the seeds of discord and rebellion among the operators. You teach them to think and defend themselves; when they should know nothing, read nothing, and be nothing but dutiful, murmureless machines. I shall have to refer your case to Col. Wilson."

The sardonic smile which wreathed the Manager's (?) roseate features, gave strong proof that he believed that he was talking to "Argus," but never was man so grievously mistaken.

SCENE 5.

"The man whom heaven appoints
To govern others, should himself first learn
To bend his passion to the sway of reason."

—Thomson.

The Star Chamber. The two offenders standing placidly at the bar awaiting sentence. The chief justice asks the vassal who would not be so unceremoniously ejected from the office, if he had anything to say why the sentence of the court should not be pronounced. Not a word. "Prisoner, the Court, after hearing all the evidence, and believing but one side, sentences you to be banished from this office during the remainder of your natural life, with a recommendation to the tender mercies of a charitable (?) world."

"And you, prisoner, are charged with the monstrous crime of looking out of a window! Of being one of those creatures who read and think. Why, sir, the Manager (?) boasts of never having 'read a covered book in his life.' How presumptuous, then, for you to form ideas of justice, of equality, and of honor, much less give them utterance. Oh! 'tis an offense that smells to heaven, and mocks the proffered mercy with which in our impregnable fortress of might we were prone to temper our justice. I therefore suspend sentence, that my horrified senses in calmer moments may fitly conjure up a punishment commensurate with your atrocious crime."

"'Tis not ever

The justice and the truth o' th' question carries
The due o' th' verdict with it: at what ease
Might corrupt minds procure knaves as corrupt
To swear against you! such things have been done."

—Shakespeare.

Thus two good men, excellent and punctual operators, and gentlemen of strict sobriety, have been driven from the profession only because Superintendent Wilson felt it incumbent upon him to sustain the rulings of the management, however arbitrary unjust, and autocratic they might have been.

Mr. Maynard says he "does not want any men in this office who are not in sympathy with the management." But how can they be when the office is run as it is, when he so magnanimously characterizes his operators as "mere machines?" Sympathy! Show me the operator who is in sympathy with the management, and I will show you one who measures his sympathy by the value of dollars and cents. Whose silence is purchased by the love he bears a dependent family, and whose manhood is perverted by the fear of being untimely ushered penniless into the street.

Professing a profound regard for our fraternity, believing that they have inalienable rights, among which is a proper and dutiful obedience to constituted authority, and a fearless protection of their individuality, I would advise them all, male and female, to avoid the slavery we here endure by keeping a goodly distance from Chicago.

March 4, 1878.

LEONA.

STEEL ENGRAVINGS THAT ARE NOT WANTED.—And now we have an enterprise set on foot to supply a want long felt by furnishing steel engravings of Wm. Orton, and others, at the exceedingly low price, to operators, of fifty cents each; if they meet with the expected demand, the probabilities are that the next advance of rates may be deferred another month. The salaries of the operators, it might, however, be well to add, have not been advanced to meet the emergency. Does not this scheme savor very much of arrogance, egotism, and narrow minded ambition? Has it not its conception in the very principle that corporations are benefactors and employes the benefited; that officials are vastly superior in every respect to employes, else why presume to thrust likenesses of themselves in our faces, and ask us to buy? It would be disgusting enough if they were offered us as presents, but what shall be said of them when offered as merchandise? M.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

March 15th, 1878.

Arctus, though dead, and the manner of his taking off uncertain, has left on earth a worthy champion, who appears ready either to take up the cudgel, or to sway the olive branch of peace, as circumstances may require.

TELEGRAPHERS' paralysis never attacks plugs. So far its depredations have been confined exclusively to first-class operators. Can it be that it scornfully disdains the meek and lowly plume, or does it think that this unfortunate class is persecuted enough?

THE Western Electric Manufacturing Co. have just issued a very handsome fifty-six page catalogue and price list of telegraph instruments and supplies. Those in the habit of purchasing telegraphic apparatus of any description will do well to send for a copy.

By recent election, Jos. Herz has been succeeded by John G. Ayres, as business manager of the California Electrical Works, of San Francisco, under the administration of the following directory: Lloyd Tevis, Geo. S. Ladd, James Gamble, Russel J. Wilson, John G. Ayres.

THE officers of the Continental Telegraph Company say that their company is progressing very satisfactorily, and that they expect to have their first wire, between New York and Philadelphia, open for business about the middle of April. Others will follow as soon as they can be constructed.

In addition to those published, we have received a number of other communications on the subject of telegraphers' paralysis, which will be published next issue. We should be glad to hear from still more in regard to this matter. The subject is an important one to telegraphers, the malady being much more widespread than most people seem to imagine. That all may be heard, writers will please be as brief and concise as possible. Our space is limited.

THE Port Chester, N. Y. *Journal*, a live, ably-conducted sheet, by the way, edited by Mr. B. F. Ashley, brother of our friend of the *Journal of the Telegraph*, copies a portion of our article on "An alleged Rupture Between the W. U. and A. & P. Co.'s," published last issue, and pays us the compliment of calling *THE OPERATOR* "a well edited and spicy journal of telegraphy." Mr. Ashley is an old telegrapher, and seems to be a natural-born journalist. He was the original starter of the *Danbury News*, at that time called *The Jeffersonian*, and is now publisher of one of the best country papers we have yet seen.

Shall We Change Our Alphabet?

We publish in this issue another communication from Mr. Phillips on the subject of telegraphers' paralysis, and the proposed eradication, as a preventative, of the spaced letters from the Morse alphabet. Mr. Phillips points out some of the ludicrous mistakes which these spaced letters occasion, and endeavors to show that the changes he suggests are in reality very slight ones, and would give us an alphabet shorter, more easily learned, and less confusing than either the Bain or Continental, and safer and less exhaustive of nerve force than the Morse.

The views of two other correspondents on the same subject are also given. The first does not favor Mr. Phillips' alphabet, but believes that with but eight hours' duty a day, and absolute rest for a few weeks every year, the malady would soon disappear; while the other is of opinion that the changes suggested by Mr. Phillips, would, in a great measure, overcome the difficulty.

Mr. Phillips evidently believes that reform, like charity, should begin at home. At all events, his alphabet, published in our last issue—we presume we might venture to call it the Phillips Non-Paralytic Telegraph Alphabet—is already partially in use by the Associated Press operators, who, we are told, have demonstrated its practicability, and regard it as an improvement over the one at present in use.

We are all intuitively opposed to giving up anything to which we have become so much accustomed—we might say attached—as we have to the Morse alphabet. It looks to many like an act of disloyalty on our part—like a gratuitous insult to the name of the great father of the telegraph, whose memory we all so fondly cherish. Yet, it seems to us, that if it be clearly shown that the alphabet has defective points—dangerous reefs and quicksands which allure the mariner to his destruction—we should not permit a foolish sentimentality like this to stand in the way of taking such steps, or making such changes as a due regard for our health and the correct transmission of business would seem to demand.

Mr. Phillips, in drawing attention to the danger which threatens the telegraph profession in the shape of telegraphers' paralysis, and in suggesting a remedy or preventative, seeks only to benefit the fraternity, and prevent its members, as he says, from becoming an army of cripples. It is well to remember this, for there is considerable truth in what Dr. Taylor once said on this subject: Among the many fallacies of the day that pass unquestioned, there is none more general nor more fallacious than that innovation is popular. The truth is, that even a judicious innovator is likely to be, at least for a time, exceedingly unpopular. He will be hated by those who are satisfied with the old system; he will be disliked by the timid and lazy, who dread the peril and trouble of change; and he will receive little favor from those most conscious of the evil, because his remedies will not act as a charm, and remove in an instant ills that have been accumulating for these many years. In men the love of ease is far superior to the love of change. In the serious concerns of life novelty is never desired for its own sake; then habit becomes a second nature, and it is only the positive pressure of evil that can drive us to alteration. We do find men, occasionally, rash and insatiable in changing, but this is only

from their being impatient under the sense of real evils, and in error as to remedies.

We think that few will question the fact that telegraphers' paralysis is now much more prevalent among us than it ever was before. In other words, that the evil is constantly and alarmingly increasing, and that the sooner telegraphers take some step toward counteracting its effects, the better. This being granted, if it can now be conclusively shown that the alphabet put forward by Mr. Phillips will really remedy the evil, paralytically speaking, and at the same time be a better safeguard against errors than the one now in use, we think it would be very shortsighted indeed not to at once make the change. The matter of changing, moreover, would be much less confusing than many imagine, especially as in Mr. Phillips' alphabet the changes are but slight, and there are no transpositions.

But would this proposed alphabet be any less paralytic than our present one? We don't think that so far this has been satisfactorily shown. We have merely the opinions of Mr. Phillips and one or two others that they think it would be. A report from each of the Associated Press operators who have subjected the alphabet to a practical test, would afford us a better opportunity of judging of its merits or demerits, and possibly some of the Associated Press gentlemen might be able to offer suggestions looking to a further improvement of the improved alphabet. The Continental alphabet is free from spaced letters, and fairly groans under its load of dashes, and yet three or four years ago, before there was any talk of telegraphers' paralysis in this country, the English papers were discussing the danger that threatened telegraphers there from this very cause, just as we are discussing it now. We have not heard anything in regard to the matter lately. It may be that there is now little or no telegraphers' paralysis in England, and if there isn't, that would be one argument in favor of either the Continental or Mr. Phillips' alphabet. We should like to hear from the *London Telegraphic Journal*, or from somebody conversant with the subject in this country, whether telegraphers' paralysis is prevalent or unknown in England and the Continent.

If a change of alphabet is to be made it seems to us that unless the new candidate be shown to be undoubtedly better, it would be but right to adopt the Continental, if for no other reason than that the same "language," so to speak, might be used by telegraphers all over the world. It would certainly be much better for many reasons, if this could be done. However, Mr. Phillips' objections on this point are well taken. And if it can be shown that his alphabet is shorter, more musical, and likely to be less perplexing to those who learn it than would the Continental, and that it possesses all the best features of the Morse, with none of its doubtful ones, we should undoubtedly find it to our interest to patronize home industry, and adopt the Phillips alphabet.

THE Governing Committee of the Stock Exchange demands that the Gold and Stock Telegraph Co. remove its instruments from the independent blackboard exchanges, under penalty of having its reporters excluded from the floor of the exchange. There are 116 of these places in the city, each of which pays \$25 a month, so that the

Gold & Stock is much opposed to taking any such step. The committee, however, insists, claiming that these independent exchanges do business on less commission, and permit smaller transactions, thus injuring the business of regular brokers. These places depend upon the quotations received over the Gold and Stock instruments, and the company having notified them of its intention to remove the instruments March 31st, the proprietors have put in the claim that in law the Gold and Stock Telegraph Company, being chartered, cannot refuse to give them the benefit of its instruments on compliance with the usual terms. They therefore intend to resist the contemplated removal of the instruments, and have employed counsel to contest the question in the courts.

The States Union Telegraph Company.

The Committee on Mercantile Affairs in the Massachusetts Legislature last week granted a hearing on the petition of Chester Snow, President of the Compound Wire Company, Erastus G. Carpenter, J. W. Stover, and others for an act of incorporation as the States Union Telegraph and Telephone Company, for the purpose of constructing, maintaining and working telegraph and telephone lines in and over the States and Territories of the United States. The incorporators propose to commence business with a comparatively small capital, and gradually increase it, as may become necessary, until it ultimately reaches ten million dollars.

As soon as the charter is granted, which it undoubtedly will, as so far nobody has appeared to oppose it, they propose to immediately build two lines, one from Boston to Washington, and one from New York to Chicago, through New York State to Buffalo, thence by way of the Lake Shore Railroad to Chicago, probably looping from Toledo to Detroit. The Chicago line is to consist of five wires. As soon as these lines are completed, they will extend their wires as fast as possible. They propose to construct and equip their lines superior to those of any other company in the country, and to employ nothing but first-class talent, in the management of their company and the working of their wires.

The new company proposes to use a compound wire, which, while equally as cheap as that now in use, is claimed to be vastly superior in quality and durability. This wire has received the sanction by the best electricians of the Western Union, but has not been adopted by that company because it has such a mass of other wire.

Our agent in Boston called upon several newspaper men and prominent business men to obtain their views in regard to the new company. They all think favorably of the project, and say that they will give it their cordial support, and think that the majority of those likely to patronize a telegraph company will support the "States Union."

At length the English Postal Telegraphs seem to be at least on a paying basis. For the year ending March 31, 1876, the expenses amounted to exactly 99 per cent. of the receipts. The revenue for the year ended the 31st day of March, 1877, amounted to £1,328,315, from which £1,120,211 had to be taken for salaries, wages, maintenance, etc., and £13,290 as a contribution to a depreciation fund to replace submarine cables. This left a balance of profit of £194,814, equal to 1.97 per cent. on a capital of £9,845,278.

This so-called salary grading seems to be but another name for wholesale reduction. Under pretence of "grading," the salaries of nearly every operator have been cut down, while those of but few indeed have been increased. Hard as a reduction is, it would not be quite so galling if one knew that there were some fairness about it, and that although your salary might be reduced, that of some one else who deserved it had been increased. But as it is, the thing is but a general reduction, the amount wrung from salaries already in all conscience small enough, going directly into the coffers of the gigantic monopoly, who, forsooth, does not "forget its employes' manly and honorable conduct." If that is the way it remembers, we should much prefer to have it allow the recollection of the matter to sink into "the swallowing gulf of dark oblivion." We suppose that after awhile American operators will get about the same salary as a private gentleman in the Russian army. The latter gets three cents a day and his board. In fact, some operators would be about as well off with that as they are at present. We hope, however, when the Continental and the States Union companies are in the field, this contemptible taking advantage of dull times and lack of competition, for the purpose of reducing salaries and increasing rates, will receive its death-blow.

WESTERN UNION stock last Friday afternoon made a rapid and rather sensational advance, rising from 77½ to 78½ the improvement being due to reports emanating from semi-official sources that there was no doubt respecting the dividend next due, and that the earnings of the company showed a large increase. The price subsequently advanced to 80½ on the further rumor that the Executive Committee at its meeting might recommend an increase in the dividend, but slightly declined when it became known that only the usual dividend had been declared, and that the quarterly report was not altogether so satisfactory as many expected.

At the quarterly meeting of the Executive Committee, held in this city on Wednesday, March 13, a dividend of 1½ per cent., payable April 15, was declared. The net earnings for the quarter ending December 31, were \$736,324.15, which, however, is \$13,914.30 less than the estimate made at last quarterly meeting. Out of this and the previous surplus of \$90,865 has been paid on various accounts \$738,891.53, leaving a surplus on the first of January of \$88,199.53. The net profits for the current quarter, partially estimated, will be about \$712,475.03, making a surplus of \$800,674.56.

A CHICAGO correspondent reports in this issue two cases of unusually severe discipline in that office. Such conduct as this will do more to prove the charges of "Argus" against the management than whole volumes of accusations. The gentleman who looked out of the window was suspended because he was supposed to be the author of the "Argus" letter. We understand, however, that he has since been reinstated.

THE *Telegraphic Journal* hears that over five thousand telephones have now been made for Messrs. Bell and Reynolds by the Silvertown Telegraph Company of London.

Themes for the Thoughtful.

Sorrows remembered sweeten present joy.

Candor is the brightest gem of criticism.

He makes no friend who never made a foe.

Simplicity is, of all things, the hardest to be copied.

Oppression makes a poor country and a desperate people.

If thou faint in the day of adversity, thy strength is small.

Letters which are warmly sealed are often coldly opened.

Speech is a faculty given to man to conceal his thoughts.

The truest end of life is to know the life that never ends.

Frequently to laugh, is the surest way of being laughed at.

It is good to have enemies, if it is only to hear of our faults.

They are never alone who are accompanied with noble thoughts.

Ill news are swallow-winged, but what is good walks on crutches.

A good conscience is able to bear much and is cheerful in adversities.

The midnight pillow is a horror to the bad man; consolation and peace to the good.

The way to gain a good reputation is to endeavor to be what you desire to appear.

What is becoming is honest, and whatever is honest must always be becoming.

It is success that colors all in life; success makes fools admired—makes villains honest.

Three things contribute much to ruin government: looseness, oppression, and envy.

The ear of a friend is the sanctuary of evil reports, there alone they are safely preserved.

Men of a lively turn and generous hearts should be born to fortunes; gain them they seldom will.

Avarice is a most stupid and senseless passion, and the surest symptom of a sordid and sickly mind.

Much adversity is requisite to make us hate life; a beckon from prosperity will recall this hatred instantly.

Fools take ingenious abuse for kindness, and often make one in the laugh that is carrying on at their own expense.

The vine bears three kind of grapes: the first of pleasure, the second of drunkenness, and the third of repentance.

To be furious in religion, is to be irreligiously religious; and it were better to be of no church than to be bitter for any.

Knowledge is the treasure of the mind; discretion is the key which makes all confident who know their treasure is so secured.

Treat every stranger as a friend; every friend as a stranger; and treat them both as they deserve, without reference to any other claim.

Atheists put on a false courage in the midst of their darkness and apprehension, like children who, when they fear to go in the dark, will sing for fear.

Neglect the first opportunity of liquidating your debts, and another may never occur. Pride hurries many a man to get out of debt; fear prevents as many from getting into it.

There is nothing of which men are more liberal than their good advice, be their stock of it ever so small; because it seems to carry in it an intimation of our own influence, importance, or worth.

A serious look well timed, will often check the obstreperous mirth of a fool, or disconcert the florid attempts of the insects who slander with a smile, and cover cruelty with the warmest expressions of concern.

Be sure to entrust no person with more power over your heart than can be recalled. It is disgusting to those who love the species, to hear any of them declare, "I am entirely guided by my friend." We act well but when we are most responsible.

Edison's Speaking Phonograph.

A reporter of the *N. Y. Sun* paid a visit to Menlo Park, N. J., week before last, to chat with "Professor" Thomas A. Edison, as he is now styled, in regard to that wonderful invention, the phonograph. This particular reporter is one of the best newspaper writers in this city, and he has much that is interesting to say in reference to the phonograph.

Menlo Park is a small place on the line of the New York and Philadelphia Railroad, two miles north of Metuchen. Mr. Edison's manufactory stands forty rods west of the depot. A high bank shuts out the view from the car windows. The building is a long wooden structure, something like an old-fashioned Baptist tabernacle. It faces to the east. Nine lightning rods pierce the sky above it. A dozen telegraph wires are led into it by sentry-like poles connecting with the main line along the railroad. The front doors open directly into the office. The writer entered. A man sat at a table studying a mechanical drawing. An inquiry for Mr. Edison drew from him the words, "Go right up stairs and you'll find him singing into some instrument."

Climbing a flight of stairs the writer found himself in a long room forming the second story. It was an immense laboratory filled with electrical instruments. A thousand jars of chemicals were ranged against the walls. A circle of kerosene lamps were smoking viciously on an empty brick floor. An open rack loaded with jars of vitriol stood in the middle of the room, and the rays of the sun struck through them, flecking the floor with green patches. The western end of the apartment was occupied by telephones and other instruments, and there was a small organ in the southwestern corner.

Prof. Edison was seated at a table near the centre of the room. He looked like anything but a professor, and reminded one of a boy apprentice to an iron moulder. His hands were grimy with soot and oil; his straight dark hair stood nine ways for Sunday; his face was entirely beardless, but sadly needed shaving; his black clothes were seedy, his shirt dirty and collarless, and his shoes ridged with red Jersey mud; but the fire of genius shone in his keen gray eyes, and his clean cut nostrils and broad forehead indicated strong mental activity. He seems to be always looking for something of great value, and to be just on the point of finding it. Unfortunately he is quite deaf, but this infirmity seems to increase his affability and playful boyishness. A man of common sense would feel at home with him in a minute; but a nob or prig would be sadly out of place. Though but thirty-one years old, the occasional gleam of a silvery hair tells the story of his application.

The Professor was manipulating a machine upon the table before him. He had something resembling a gutta-percha mouthpiece of a speaking-tube shoved against a cylinder wrapped in tinfoil, which he turned with a crank. The small end of a tin funnel was clapped over the mouthpiece, and strange ventriloquial sounds were issuing from it. He shook hands, and pointing to the instrument said: "This is my speaking phonograph. Did you ever see it, and hear it talk?"

The reply was a negative. Thereupon, he picked up the gutta-percha mouthpiece, saying, "This mouthpiece is simply an artificial diaphragm. Turn it over," suiting the action to the word, "and you see this thin disk of metal at the bottom. Whenever you speak in the mouthpiece the vibrations of your voice jar this disk; which, as you see, has in its center a fine steel point. Now for the other part of the machine. Here is a brass cylinder grooved something like the spiral part of a screw, only much finer. I wrap a sheet of tinfoil around the cylinder, and shove the mouthpiece up to it so that the tiny steel point touches the tin foil above one of the grooves. I then turn the cylinder with a crank, and talk into the mouthpiece. The vibrations arouse the disk, and the steel point pricks the tinfoil, leaving perforations resembling the old Morse telegraphic alphabet. They are really stereoscopic views of the voice, recording all that is said, with time and intonations. It is a matrix of the words and voice, and can be used until worn out. Now let us re-set the cylinder, so that the steel point may run over the holes or alphabet made when we talk in the mouthpiece. The thin, metal disk rises, and, as the steel point trips from perforation to perforation, opening the valves of the diaphragm, the words, intonation, and accent are reproduced exactly as spoken. For instance, before you came up, I was talking to the instrument, and here is the matrix or stereoscopic view, if you

please, of what I said," putting his finger on the tinfoil which still remained on the cylinder. "Now I reset the instrument," sliding the cylinder to the right. "Here the steel point starts at the same spot as when I talked through the mouthpiece, but its action is now controlled by the perforated alphabet. It repeats what I said. I use this sort of an ear trumpet to bring out the sound, so that you can hear it more distinctly. Listen."

He placed the small end of the funnel over the mouthpiece, shoved the mouthpiece against the cylinder, and turned the crank. The following words chased each other out of the funnel:

Mary had a little lamb,
Its fleece was white as snow,
And everywhere that Mary went
The lamb was sure to go—to go—to go—
Ooh ooh ah!
Cockadoodle doo—ah!
Tuck—a—tuck—a—tuck
Tuck—ah. tuck ah!

The cylinder was again set back, and the crank turned very slowly. The effect was ludicrous, for the Professor had originally pronounced the words with great gravity and dignity, and the drawing way in which the instrument repeated them would have made a horse laugh. The cylinder was then turned very fast, and the words flew out of the funnel so fast that they struck the ear in a confused mass. But a most extraordinary effect was produced when the Professor turned the cylinder backward. It said:

Go to sure was lamb the,
Went Mary that everywhere and,
Snow as white was fleece its,
Lamb little a had Mary.

All this with profound gravity, as if the fate of the world depended upon the accent and pronunciation. Mr. Edison then tore off the tinfoil and wrapped a fresh sheet around the cylinder. One of old Mother Goose's rhymes was murmured into the mouthpiece, and its alphabet pricked out by the action of the needle point. The cylinder was then reset, and the crank turned with the following result:

Rub a dab dub,
Three men in a tub,
And who do you think was there?
The butcher, the baker,
The candlestick maker,
They all jumped out of a rotten potato.

The instrument is so simple in its construction, and its workings so easily understood, that one wonders why it was never before discovered. There is no electricity about it. It can be carried around under a man's arm, and its machinery is not a fiftieth part as intricate as that of a sewing machine. It records all sounds and noises. The Professor blew in it at intervals, and the matrix recorded the sound and returned it. He whistled an air from the "Grand Duchesse" and back it came as clear as a file, and in perfect time. He rang a small bell in the funnel. The vibrations were recorded, and, on resetting the cylinder, the tintinnabulatory sounds poured out soft and mellow. Mr. Edison coughed, sneezed, and laughed at the mouthpiece, and the matrices returned the noises true as a die. But, most remarkable, the instrument sent back the voices of two men at the same time. To illustrate: The Professor, in a deep bass voice, recited in the mouthpiece the first verse of "Bingen on the Rhine." A matrix was obtained, and the machine reset, the funnel placed in position, and the crank turned. The words came out as though some tragedian was endeavoring to affect an audience to tears:

A soldier of the legion lay dying in Algiers,
There was lack of woman's nursing, there was lack of
woman's tears.
But a comrade stood beside him while his life blood
ebbed away,
And bent with pitying glances to hear what he might
say.
The dying soldier faltered, as he took that comrade's
hand,
And he said, "I never more shall see my own my native
land;
Take a message and a token to some distant friends of
mine,
For I was born at Bingen—at Bingen on the Rhine."

While these affecting words were pouring out, the Professor shouted into the funnel several petulant exclamations. At the close of the verse the cylinder and its matrix were reset, and the recitation again came out of the funnel, interruptions and all as follows:

A soldier of the legion lay dying in Algiers,
— "Oh, shut up!" — "Oh, bag your head!"

There was lack of woman's nursing, there was lack of
— "Oh! give us a rest!" — "Oh, what are you giving us!" — "Oh,
woman's tears.
— "Dry up!" —
But a comrade stood beside him while his life blood
— "Oh, what are you giving us!" — "Oh,
ebbed away,
cheese it!"
And bent with pitying glances to hear what he might
— "Oh, you can't recite poetry — — — Let
say,
up!"
The dying soldier faltered, and he took that comrade's
— "Police! Police!" — — —
hand,
"Police!"
And he said, "I never more shall see my own, my native
— "Oh, put him out!" — — — "Oh, cork
land."
yourself!"

It is impossible to describe the ludicrousness of the effect. The Professor himself laughed like a boy. One of his assistants told a story concerning a trap laid for a well-known divine, who was skeptical regarding the capabilities of the instrument, and evidently had a suspicion that the Professor was a ventriloquist. He wanted to talk into the mouthpiece himself, and see if his own words would be recorded and repeated. A matrix was put on the cylinder that had been used once before. The Doctor repeated a Scripture quotation, and to his great astonishment it came out as follows:

"He that cometh from above is above all ["Who are you?"]; he that is of the earth ["Oh, you can't preach!"] is earthly, and speaketh of the ["I think you're a fraud!"] earth; he that cometh from Heaven is above all. And what has he seen and heard ["Louder, old pudding head!"] that he testifieth; and no man receiveth his testimony ["Oh, go and see Beecher!"]"

The possibilities and capabilities of this remarkable instrument are wonderful. Dolls and toy dogs can be made to recite nursery ballads, and wax figures of notabilities can use the voice and language of their originals. A prominent showman has already taken steps toward the formation of a museum of wax figures similar to Madame Tussaud's in London. All the figures are to speak. Matrixes of the voice and words of a gentleman whose imitations of Edwin Forrest are astonishing are to be secured and placed in the breast of a wax statue of the great tragedian. The voice and outward appearance of Mr. Forrest are to be perfectly copied.

"Why," says Mr. Edison, "Adelina Patti can sing her sweetest arias, and by this instrument we can catch and reproduce them exactly as sung. The matrixes can be copied the same as stereoscopic views, and millions sold to those owning the machine. A man can sit down in his parlor at night, start his phonograph, and enjoy Patti's singing all the evening if he chooses. The same with Levy's cornet playing. A matrix of his solos can be produced, and a million copies taken, and Levy's solos and Patti's arias can be given ten thousand years from now as perfectly and accurately as when these great artists were alive. If the last benediction of Pope Pius had been taken by the phonograph, the matrix could have been duplicated, and every true Roman Catholic on the face of the earth might have heard the benediction in the Pope's own voice and accentuation. There was a fortune in it. The matrixes could have been sold at five dollars apiece.

"Poor churches in the country," continued the Professor, "might have these machines rigged up over their pulpits, and by using the proper matrixes, could have Dr. Chapin, Dr. Bellows, Beecher, or any other great theological light expound to them in their own voices every Sunday. Thus the poor churches would save their money, and get rid of the poor preachers. Nor is this all. A man in Europe has invented a machine by which he takes an instantaneous photograph. Let us suppose that he photographs Dr. Chapin every second, and we take down his sermon on the matrix of the phonograph. The pictures and gestures of the orator, as well as his voice, could be exactly reproduced, and the eyes and ears of the audience charmed by the voice and manner of the speaker.

"Whole dramas and operas," continued Mr. Edison, his eyes sparkling with excitement, "can be produced in private parlors. The instrument can be used in a thousand ways. Say I hire a good elocutionist to read David Copperfield, or any other work. His words are taken down by machine, and thousands of matrixes of David Copperfield produced. A man can place them in the machine, and lie in bed, while the novel is read to him by the instrument with the finest grade of feeling and accent

He can make it read slow or fast, can stop it when he pleases, and go back and begin again at any chapter he may choose. I could fix a machine in a wall, and by resonations any conversation in a room could be recorded. Political secrets and the machinations of Wall Street pools might be brought to light, and the account charged to the devil. Kind parents could lie in bed and hear all the spoony courtship of their daughters and lovers. A man who loved the music of the banjo or the fiddle could buy his matrix and listen to Horace Weston or Mollenhauer whenever he liked. He could have the whole of Theodore Thomas's orchestra if he wanted it.

"To a certain degree," said Mr. Edison, "the speaking phonograph would do away with phonography. A man could dictate to his machine whenever he pleased, turn the machine over to an amanuensis, and let him write it out. A lawyer through the machine might make an argument before a court, even if he had been in his grave a year. An editor or reporter might dictate a column at midnight and send the machine up to the compositor, who could set the type at the dictation of the machine without a scrap of manuscript. I tell you there is no limit to the possibilities of the instrument."

The reporter asked how soon the phonograph would be thrown upon the market.

"We expect to offer them for sale within two months," said the Professor. "The price of the finest machine will be about \$100, but we shall sell inferior ones at a much lower price. The matrices will be for sale like sheets of music, and can be used upon all the machines."

"One of the remarkable features of the invention is the fact that the diaphragm can be placed in steam whistles and made to talk like a calliope. The captains of ships at sea miles away from each other could converse without trouble, and correct their chronometers. The steam whistles would throw any voice into articulated speech. With a metal diaphragm in the whistle of a locomotive, the engineer could roar out the name of the next station in a voice so loud that it could be heard by every passenger on the train and by every man within a distance of two miles. Placed in a steam fire engine, the chief engineer could talk to every foreman in the department without difficulty, no matter how great the uproar. A machine might be put up in the Jersey City Railroad depot that would shout 'This side for Newark, Elizabeth, Rahway, and New Brunswick! Train on the left for Philadelphia, Baltimore, and Washington! Show your tickets!'

"Why," said the Professor, "I could put a metal diaphragm in the mouth of the Goddess of Liberty that the Frenchmen are going to put up on Bedloe's Island that would make her talk so loud that she could be heard by every soul on Manhattan Island. I could drop one in a calliope and set it talking so that men could hear it miles away. Within two years you will find the machine used for advertising purposes. It will be sitting in the windows of stores on Broadway and other streets singing out, 'Babbitt's best soap, 'New York Sun—price two cents,' 'Brandreth's Pills,' 'Longfellow's Poem's,' 'Ten cents for a shave!' and so on. There is no end to its uses. It will sing songs and whistle. A man has already made application to use the phonograph in cabs, so as to record the complaints of passengers. The Ansonia Clock Company, of Connecticut, have one in their manufactory this minute, and it shouts 'Twelve o'clock!' and 'One o'clock!' so loud that it is heard two blocks off. One might be used as an alarm clock. If its owner wanted to get up at a certain time in the morning, he could set the alarm, and at the appointed hour the machine would scream 'Hallo, there! five o'clock! What's the matter with you? Why don't you get up.'"

The Professor calls the machine applied to steam whistles the airophone. He is now constructing one to put up in front of his manufactory, and intends to make it talk so that it can be heard two miles. He says "Old Bill Allen, of Ohio, will be nowhere."

Several of his speaking phonographs have been sent to England, where they have created a profound sensation. Mr. Edison says that he received a cable despatch on Friday last, offering him £3,000 and half the profits for the right to sell the instrument in that country.

"How did you discover the principle?" asked the reporter.

"By the merest accident," said the Professor. "I was singing to the mouthpiece of a telephone, when the vibrations of the voice sent the fine steel point into my finger. That set me to thinking. If

I could record the actions of the point, and send the point over the same surface afterward, I saw no reason why the thing would not talk. I tried the experiment first on a strip of telegraph paper, and found that the point made an alphabet. I shouted the words 'Halloo! halloo!' into the mouthpiece, ran the paper back over the steel point, and heard a faint 'Halloo! halloo!' in return. I determined to make a machine that would work accurately, and gave my assistants instructions, telling them what I had discovered. They laughed at me. I bet fifteen cigars that the thing would work the first time without a break, and won them. I bet two dollars with the man who made the machine, and won that also. That's the whole story. The machine came through a pricking of the finger."

The New York Wire Club.

I see the swarthy trappers come
From Mississippi's springs;
And war-chiefs with their painted brows,
And crests of eagle wings.

Behind the scared squaw's birch canoe,
The steamer smokes and raves;
And city lots are staked for sale
Above old Indian graves.

Denny Harmon rapped for order, and the Secretary, James F. Crate, proceeded to call the roll. All the members responded to their names with the exception of Gilly Olmstead, who, however, was unanimously excused on Luther R. Hallock explaining that Mr. Olmstead was detained at the office waiting for the Kentucky drawings. Mechanical Engineer Morris introduced two students from the School of Quads, Messrs. Wood and Kearny. They had graduated under his immediate supervision, he said, and were going West. [Applause.] The salaries to be paid them was \$95 a month in gold coin. The remarks of the distinguished engineer were greeted with a spontaneous whirlwind of applause and cheers that rang with a vehemence totally deafening, and which even threatened the equilibrium of the walls and roofing. It was the New York telegraphers' recognition of fair salaries and a sound currency. After the cheering had subsided Joe Wood stepped forward and said: "Gentlemen—It is with feelings of sadness that I gaze upon your faces this evening. I go hence to the land of the setting sun, where at times the click of my sounder will be drowned by the whoop of the red man and the thundering tramp of herds of buffalo. In connection with my departure, I can say in the language of Lord Byron: 'We have greatly ventured, but all must do so who would greatly win.' [Applause.] 'It may be years ere we meet again, but the remembrance of our many little chats on quad matters will linger to cheer me in that far off country. I shall continue to sign 'Jo.' I now bid you all an affectionate farewell." [Applause and cheers.] Jerry Borst remarked that in the departure of our two young friends he vividly realized how dingy the pleasure garden had grown, and what a number of the lights had gone out since his time. [Applause.] Fred Wilcox said: "I have been requested by the entire Eastern force of the office, including the three ladies, to say something on the occasion of my joining the famous Wire Club. This is indeed a Red Letter day in my life, and as I look upon the speaking faces of my colleagues I am lulled into dreamland, and my heart is as peaceful as the breathing of a summer sea asleep on the sandy shore." [Applause.] The reporter of THE OPERATOR apologized for his absence from the last two meetings of the club. He had been experiencing ill-health and ill-luck, but yet hoped to discover that the world is a very bright place. [Applause.] Tyrolean warblings by Miles O'Reilly closed the proceedings.

A New Haven gentleman has been very much disturbed of late by a loud buzzing noise, which generally began about midnight. It resembled the continuous roar of waves beating on the shore, and was at first taken for the notes of a fog-horn. After a number of nights of fruitless investigation, he went to the roof on a tour of observation, and at last traced the noise to two wires which ran near his bedroom window, and which, as he observed were touching each other. The next day he found that they were telephone wires, and he applied for their separation, so that he might have uninterrupted sleep. From other sections of the city come complaints of similar nocturnal noises, which can undoubtedly be traced to the fouling of telegraph or telephone wires.

Salary Grading Another Name for Reduction.

In these days of sliding scales and gradings, the following extracts from the circular which was issued by the Western Union Telegraph Company during the great strike of 1870 will be read with interest. It will show the men who held the balance of power at that time, and who cast it against the operators, how the company has kept faith with them:

"It is well known that the alleged pretence of a contemplated reduction of wages was entirely unfounded, and that but one man has left the employment of the company upon a question of compensation. * * *

The officers of the company desire to express their hearty gratitude to those of our employees who have remained loyal to duty, and to assure them that the Western Union Telegraph Company will not forget their manly and honorable conduct."

During that stormy period I had the honor of being a member of Circuit No. 1 of The Telegraphers' Protective League, and participated in the strike which was inaugurated by Circuit No. 32. I might add that the best and staunch members of the old League were ladies.

There has been a great deal said and written for and against trades unions. Now let us take the case of the New York Central Railroad employees, for instance. The only class on that road who today are paid living wages are the locomotive engineers, and why? Because they are well organized, and the Vanderbilts would lose more than they could possibly gain in a contest with the Brotherhood.

It is an open secret that the clique representing the "Vanderbilt interest" are the instigators of the recent reductions which have been made in the salaries of Western Union operators, the men (?) who are doing the dirty work being young Twombly—who not long ago married Vanderbilt's daughter—Banker, who is also married into the Vanderbilt family, and E. D. Morgan.

The knowledge that there are some operators receiving a little more salary than is requisite to buy the bare necessities of life is appalling to the worthy trio. But these directors can create offices for their own relations which are mere sinecures, and pay them salaries of from \$2,000 to \$3,000 per annum without a whimper, and also exempt them from "grading," which is the new sugar-coated name for reduction.

Very many operators who have families dependent upon them for support, and who have grown gray in the service, have been hugging the delusion that even if there were no prospects of an advance in the future, as there are in various other pursuits, their salaries would at least be left alone so long as they continued to faithfully discharge their duties; but what a rude awakening has been theirs!

This grading business, in brief, consists of an arbitrary order to each superintendent or manager, as the case may be, to reduce the aggregate expense of the office or division, and the money so obtained goes into the pockets of the modern Shylocks, who care nothing whatever about the fairness or unfairness of grading, it being simply the most plausible method of getting the money out of faithful employees.

Money is thrown away at present on the most chimerical things in the Western Union shops in New York. They are now working on an automatic system which will cost thousands of dollars, yet any intelligent electrician could tell at a glance that it will never amount to anything. Whenever a deficiency occurs in the treasury from any cause whatever, the remedy is "reduce the salaries of the operators." Next summer, doubtless, a call will again be made upon us to "cheerfully co-operate," or, in other words, work longer hours without extra compensation.

Not many years ago a man ruled New York city as with a rod of iron. He controlled all the judges and legislators in the State, and when he sanctioned something that was so particularly odious to the people as to arouse their indignation, he merely put his hands in his pockets and inquired, "Well, what are you going to do about it?" He has had his curiosity fully satisfied, and his question thoroughly answered. NUMBER 2.

The London *Figaro* says that the telephone is to be tested next month by a vocalist singing from London to Boston.

The French propose to erect a monument to the memory of Ruhmkorff, who, although a Hanoverian by birth, is regarded as a Frenchman, inasmuch as his powers were developed in France.

Telegraph Operators as Pedestrians.

A walking match under the auspices of the W. U. Athletic Club took place at Gilmore's Garden, in this city, on Saturday, March 2. There were ten starters: Wm. Mayer, Jr., Hugo Wiese, J. P. Bradt, E. F. Welsh, J. W. Foster, J. A. Wright, A. R. Wright, John F. Cleveland, David B. Mitchell and John Molatti. The distance was one mile, or nine laps of the inside track. Mayer, who is a celebrated athlete, having won several prizes in previous contests, allowed Wiese twenty seconds, and the other contestants from thirty-five to forty-five seconds start. Mayer walked the mile in 7:46½, taking first prize, which consisted of Macaulay's History of England, and an edition each of Shakespeare and Tennyson. Wiese came in thirty yards behind, and took the second prize, a silver badge. Bradt was one foot behind Wiese, and received the third prize, a copy of Shakespeare. Messrs. Welsh and Foster, who were well up with the third man, made a dead heat for fourth place, the others coming in four or five seconds later. Mr. E. Plummer, of the *New York Sportsman*, was time keeper and referee. After the walking match Vincent Murphy, of the city line, ran around the track in twenty-five seconds. The boys were greatly pleased at the presence of Manager Downer, of the W. U. main office. About forty operators, including a delegation of A. & P. men, were present. The next tournament of the club takes place April 6th. Any information thereof can be obtained from E. F. Welsh, President, or James H. Lyman, Secretary.

Baltimore Notes.

As your paper seldom has a communication from Baltimore, I thought I would devote some leisure time to letting the country know that the little town of Baltimore still exists. We all look forward to the arrival of *THE OPERATOR*—that dear little paper, and upholder of telegraphers' rights—with great pleasure, and we all feel proud we have such a champion as W. J. Johnston on our side, who says what he thinks, and thinks what he says. All of the W. U. men take *THE OPERATOR*, and if the railroad offices were properly canvassed your independent little paper would gain at least a hundred new subscribers, for I do not think that there is an operator in Baltimore who has a soul and expects future salvation who would not give a dollar and a quarter a year to secure its semi-monthly visits. If there is one, I would like to see him—Barnum should have him. We are all getting along as usual here, plenty of work and small wages. The following operators are still working for the W. U. Co.: S. D. Sprigg, the amiable; F. G. Adams, the telegraph pole; Lawrence Parker, the beau and theatre goer; A. Bowersocks, the family angel; E. L. Busard, the Sunday school scholar; Marshall McCord, the evangelist; C. G. Stuart, the portly register; Isaac Hallenstein, the ladies' pet; Richard Bloxham, the brunette; Alex. Bauer, the electrician; S. W. Thwait, the consumptive; Davy West, the pedestrian; W. A. Wisong, the broker. And at the branch offices we have: F. Morse Clark, Miss Sadie O'Donnell, Miss Clara M. Utley, and Miss Annie Mabel Harris, who are so good and nice that we cannot find words to express our admiration. At Camden Station they have C. E. Clagett, H. O. Steltz, W. A. Hastings, Harry Smith, Charlie Adams, C. W. Charvot, and A. J. Wright, all first-class operators who deserve double the salaries they are now getting. At A. & P. office, Haden Gentry, F. Connor, J. A. Bandell, Fred Cook, William Clark, and Jos. A. Greenwell are all on the ragged edge—not knowing what a day may bring forth. Philadelphia, Wilmington, and Baltimore office has C. M. Thompson, L. D. Wilburn, N. B. Curry, E. H. Trainor, F. H. French, and I. B. Kurtz, who are called the telegraph aristocrats—never having been humbled by a reduction of their salaries, and being so fortunate as to work for a corporation with a soul. At the City Police and Fire Alarm Telegraph is J. Frank Morrison—the most efficient, energetic, and accomplished superintendent, and the most thorough electrician it has ever been Baltimore's fortune to have in charge of her fire department. His whole soul seems to be in his business, and if fidelity and good management is rewarded, he will have charge of the Fire Department as long as he wants it. He has as assistants, Messrs. Lucas, McAleese, Crummer, and Kenny, all good men. On the Oil Line I must not fail to mention Mr. J. A. Hageman, who by his gentlemanly bearing, polite behavior, and attention to business, puts many bright suitings in their treasury. A. G. Davis, formerly Superintendent Gold and Stock, W. U. and

B. and O. Telegraph, and several others, have formed a telephone company to develop the telephone here, and have met with some success—a number of business houses using this means of communication. I believe I have given you all the news I can gather, so I will close my communication by wishing your paper all the success it deserves.

AMICUS.

The gross receipts of the Montreal Telegraph Co. for the year 1877, were \$514,122.26; expenses, \$345,450.83; and net profit \$168,681.43. The number of messages handled was 1,766,361, being an increase of 3,642 over last year. The company has 1,537 offices, 30 being opened during the year, and 20,492 miles of wire, a decrease of 77 for the year. Compared with 1876, there was an increase in the receipts of \$5,203.01, and a decrease in the expenditure of \$11,905.41. A dividend for the year of 7½ per cent was paid on the stock. The gross revenue of the Dominion Telegraph Co. for 1877 amounted to \$177,081.88, as against \$146,555.75 for 1876, an increase of \$30,526.13. The expenses amounted to \$124,397.68, or at the rate of 70-25 per cent, on the gross earnings, as against 73-00 per cent, for the preceding year. The net revenue for 1877 amounted to \$52,684.20, as compared with \$39,565.59 for 1876. The Dominion Company has 400 offices, 58 of them having been opened during the year, and 7,824 miles of wire, an increase of 678 for the year.

PERSONALS.

O. W. White is operator for the U. S. Signal Service at Camp Thomas, Arizona.

Kate Field has written a book on "The Telephone," which will be published in London.

Mr. W. A. Gibson, Lafayette, Ind., desires the present address of Mr. R. R. Wise, formerly manager of the W. U. at Petrolia, Pa.

A handsome testimonial has been presented to the retiring General Superintendent N. De Bree, signed by thirty-six of the I. O. T. Co.'s employés.

President Orton is one of the three commissioners appointed to view the route of the Elevated Railroad in this city, and assess damages, if any.

Mr. James C. Lewis has resigned his position as "night hawk" at Bacon Creek, Louisville Division, L. and N. and G. S. R'y, to accept a more lucrative one with the W. U. T. Co.

Amid all this talk of salary grading, telegraphers' paralysis, and "laurels as green and eulogies quite as elaborate," it is refreshing to notice a telegrapher, Mr. Edison, spoken of as the "Napoleon of Science." That's what the *Sun* calls him.

Miss Charlier has resumed duty at "197," after an absence of three months. She has entirely recovered from her illness, and looks as blooming as of old. Mrs. Fraser, who resigned last fall, has also returned. Miss Mullhallon has been ill for some months, and is still unable to resume duty.

A correspondent says that as Mr. Frank Jones, of the Buffalo office, was returning from work one evening in the latter part of February, he slipped on the icy pavement and broke his leg in two places. His comrades of the day and night force, with their proverbial kindness and sympathy for a brother in trouble, came valiantly to his aid, and while the former pay the physician's charges, the latter have been and are still doing his day work, that he may lose no part of his pay. As he has a wife and children, he will find this aid most invaluable, and will not soon forget it.

An audience of nearly two hundred attended the first regular meeting of the "Electrical Society of the Ohio Valley," Cincinnati, March 5. President B. H. Johnson opened the meeting with a few appropriate remarks in regard to the value and usefulness of an electrical society. Mr. O. K. Newton read a paper on batteries, which was very interesting and instructive to beginners. Mr. W. C. Ross exhibited an electric light, demonstrating and explaining its effect under different circumstances. The entertainment was interspersed with music, furnished by the Paulsen boys and Messrs. J. C. Mattoon and E. T. Gilliland. The society already numbers 95 members, and still they come.

FLORIDA.—James McLeod manipulates the two way wires at Lake City. Jeems is a rushiar. W. C. DeGraffeur disturbs the current at the Jacksonville depot, F. C. R. R. Graff is well liked by all. The line of the Fort Mead and Tampa Telegraph

Company has been completed and is awaiting t battery. Tampa is accordingly happy. D. E. Pi of the G. & S. Co., New York, is wintering at Tallahassee. His friends in New York and elsewhere will be glad to learn that his health has greatly improved. He weighs about a ton. He has been up the St. Johns and Oklawaha rivers, East Florida, and has suffered somewhat from lockjaw in endeavoring to pronounce some Florida names of cities and rivers.

BALTIMORE & OHIO R. R. THIRD DIVISION ITEMS.—At Grafton, western terminus, and junction with Parkersburg Division, Mr. A. T. Cline is division operator and manager. The operating force consists of Messrs. Chas. Brendle, Geo. Smith, and Ed. Walters; at Newburg are T. M. Clayton, and Chas. Sheriff; West End, W. S. Haymond and W. J. Lavelle; Tunnelton, J. E. Wolcott and L. Higgins; Tray Run, L. G. Cocknell and Pat Maloney; Buckeye, H. S. Dering and Ben Vance; Rowlesburg, W. W. Shoch and Jno. Graham; Cranberry dispatchers office, H. Fonner, train dispatcher, and Messrs. D. Lovenstine and S. Grandstaff, operators; Altamont, J. Cassidy and W. Walker; Piedmont, J. G. Nesbitt and W. H. Cline; Keyser, C. W. Bowie and E. Newman.

CANADA SOUTHERN RAILWAY NOTES.—Beginning at St. Thomas headquarters, we have W. W. Wells superintendent of telegraph, Geo. Noble, Hugh Daly, and Wm. Bay, dispatchers, and Charles Barr copyist. At General Offices, Geo. W. Fowler, and his assistant, N. Couch; at shops, L. C. Benton; at freight office, W. F. Whitman. Springfield is cared for by Charlie Mann, Brownsville by Mr. Barry, Tilsontown by Mr. Sinclair, Hawtree by P. G. Bromley, P. D. Junction by A. Shain, Waterford by G. W. Nelis, and his kid gloves, Villa Franca by Mr. Buch, Hogarsville by J. H. Salter and James Dart, Deans by Douglas Young, Canfield by J. Rispin, Attercliff by F. Branton, Perry by W. J. Heathers, Wellard by J. Houston and Bobby Burns, Victoria by Mr. Abbey, Fort Erie by Mr. Gollay. A walk across the International Bridge and you can have a shake hands with Hank Gardner, the star of the profession. At the General Freight Office, Buffalo, is Miss Heneage, the pet of the line. SKIP.

BOSTON NOTES.—Various rumors have prevailed here for several days past over a proposed grading of salaries, causing considerable excitement among those likely to be affected by such an arrangement. On Saturday, the 9th inst., their fears were set at rest by the promulgation of the following notice: "For the better regulation of salaries in the Boston office hereafter, and in order to equalize them to some extent at the present time, amounts not multiples of five have been changed to some such multiple, to date from March 1st." This reduces all \$100 salaries to \$95. That being the highest salary paid to operators. Operators ranging from \$57 to \$90.50 were either reduced or advanced, according to their ability, to conform to the above notice. Mr. Fred A. Bradford has been appointed Manager of the Hotel Brunswick office, one of the most important branch offices in the city. Mr. Bradford is a good operator and deserves his promotion. Mr. Thos. W. Greene, late Manager A. & P. office, Lawrence, Mass., has accepted a position with the W. U., this city. Mr. B. G. Winter, Manager "Bn" office, is absent on a three months' vacation. At last accounts Mr. Winter was on his way to Denver, Col., and snowbound in Wallace, Kansas.

MARRIAGES.

NEWTON—ROBINSON.—February 28, at the residence of the bride's parents, Frankfort, Ky., by the Rev. Dr. Hendricks, Mr. Charles Newton, of the Western Union, St. Louis, to Miss Sallie N. Robinson.

CULP—BAKER.—February 19, at the residence of the bride's parents, by the Rev. John Barker of the First Lutheran Church, Mr. C. W. Culp, of Altoona, Pa., night operator and train runner, Pittsburgh Division of the Pennsylvania R. R. Co., to Miss Maggie C. Baker, of Altoona, Pa.

BIRTHS.

January 7, to R. J. Bloxham, operator Western Union Telegraph office, Baltimore, a son.

March 1, to Fred F. Bayse, manager W. U. Tel. Office, Cumberland, Md., a daughter. First edition.

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The above are recommended to Telegraphers, many of whom are already appreciating the necessity of learning Shorthand, as three of the best books for that purpose before the public. Whether or not the Telephone will make it necessary for Operators to understand Phonography, every Telegrapher will be the better for having studied it. The time required is not more than a few minutes daily.

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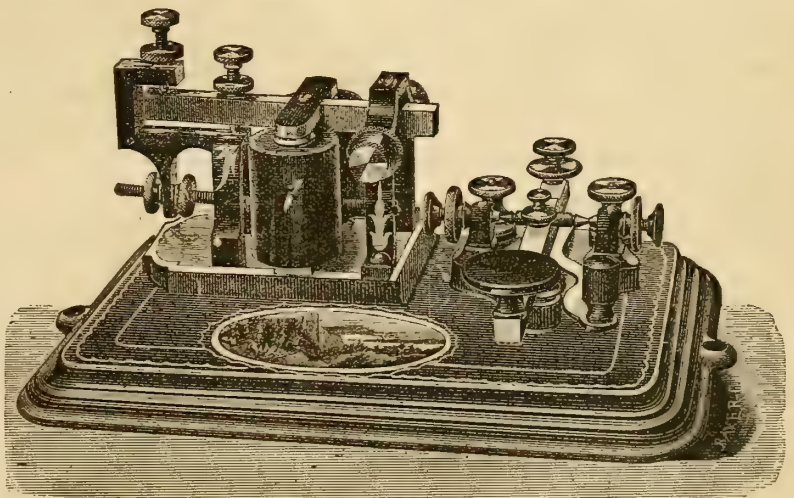


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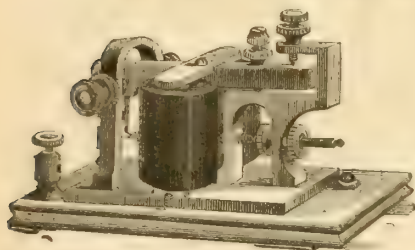
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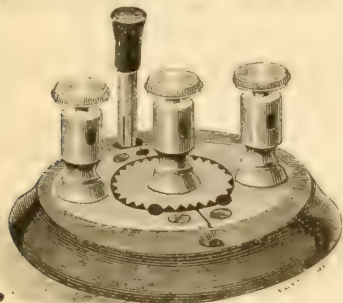
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THE OPERATOR

A JOURNAL OF

SCIENTIFIC & PRACTICAL TELEGRAPHY

April 1st, 1878.

Volume IX.

Whole No. 99.

The Speaking Phonograph.

A country church our patience tries,
A country sermon shuts the eyes.

Yet there are then the sweetest notes
That ever thrilled from human throats,
And organ tones, full, rich, and rare
Came floating, dream-like, in the air.

The music ceased—alas, too soon,
And I commenced my nap till noon,
But started, when the text was roared,
And stared at Beecher, Henry Ward.

And as he pounded, laughed, and cried,
The country people opened wide
Their mouths in wonder, as they gazed,
While I, like them, felt much amazed.

When baskets had been passed around,
And all with benediction crowned,
I straightway found an honest deacon,
Whose fiery nose shone like a beacon.

And said: "Good deacon, tell me why
This country church is up so high
With music and that preacher gay,
When city churches cannot pay?"

He looked at me and laughed a laugh:
"Why stranger, that's a Phonograph
From all the prima donnas, rare,
We wire their latest opera air;

"And Beecher—mind, I tell you facts—
Is but an image made of wax;
With other churches we exchange,
And thus secure the widest range.

"Of pastors, eloquent and good,
And save, both in their pay and food;
But Talmage, fastened on a string
From ceiling, so that he can fling

"The antics of a jumping-jack,
Is called the best card in the pack.
These men of wax, so nice to handle,
Have never yet made one wax scandal.

"Therefore they cause us no concern,
For shining lights like these don't burn."
HERWICK C. DODGE.

Telegraphers' Paralysis and the Phillips Alphabet.

As the Phillips alphabet is the order of discussion, I would suggest to not a few operators that they try the plan of spacing their words at least enough to distinguish one word from another. I think that with a little practice in this "operators' paralysis" will be overcome, as they will then gain the "rest" so desirable, and prevent paralysis of the brain in the operator at the other end. I would also suggest that the companies dispense with all plugs unable to make the spaced letters as Prof. Morse intended they should be made. By this plan "Essiss" would be unknown, and paralysis of the pocket would be averted, the "grading system" would be unnecessary, and the wires would assume a healthier condition in every respect. In short, let the company employ only those that make the Morse alphabet as it is, dispense with those that have an alphabet of their own, and then paralysis of the arm, paralysis of the brain, and paralysis of the pocket will be unknown.

BALTIMORE, Md., March 21st.

SANS.

In my opinion, "pen palsy" and "telegraphers' paralysis" are identical, and either or both the result

of the excessive use of the nerve force, or the attempt to increase the maximum capacity or power of the muscular tissues. I also have felt the "shooting pains" Mr. Phillips describes in sending a favorite word, but similar pains have attacked my hand, wrist and arm after a certain period of continuous receiving. If more persons have been stricken with this "paralysis" than with "pen palsy," it is because sending operators are anxious to give the receiver the "rush." I believe that I state the experience of every "Knight of the Key," when I say that their initial ambition was, or is, to "salt" somebody. The forlorn "Hoosier" who exultingly cried, "Ha, ha! I thought I could maj you break," illustrates this point very forcibly. Our human machinery is not unlike the working of an engine, whose capacity may be one hundred horse power, which, when subjected to greater requirements, fails to meet the requirement. Have you not heard times without number operators commence a word or sentence with Catlin or Duncan-like speed, and after vainly endeavoring to "keep it up," go to pieces? And why? Because a transmitter, capable of thirty words maximum, cannot sustain a speed of forty words a minute, and the attempt to attain the impossible results in getting "all broke up." Paralysis and pen-palsy feed upon just such material, and will continue so to do, whether with Morse or any other alphabet. The limit to human capacity must be observed, or, if disregarded, the consequences be upon the offender. Operators should not be required to "send or receive continuously, but alternately by the day or week. Operators who work way wires, where business is frequently exchanged, are rarely affected by these pains, although the volume of business be no less than on other circuits. With all due deference to Mr. Phillips, a change in the present Morse alphabet would be injudicious for reasons which have been heretofore given. The change suggested, moreover, would not remedy the evil. It requires more physical power to make dashes than dots, and the increased length of the characters would only add to the present labor to the extent of about one-fifth.

The substitution of a changed alphabet, with difference of movement, would scarcely prove a cedeedy, because the muscles brought into play by the new alphabet would, when operators became proficient, be subject to the same tension as now, and hence there would be the same struggle to exceed the limit of power over again, with like results.

BUFFALO, N. Y., March 7th, 1878.

J.

The periodical discussion in our representative journals of "writer's cramp," which seems to be alarmingly on the increase in our profession, should receive the fullest consideration from those most concerned, and no proposed remedy that has even the semblance of relief in it should be set aside without a fair and patient trial. The suggestion of the unsophisticated "Bluestone" in the last issue of THE OPERATOR, that a sure remedy is to be found in official permission to draw two or three weeks' pay every year without performing any labor therefor, with eight hours to constitute a day's work, must be brushed aside at once—like his other references to matters which he has neither concern with nor accurate knowledge of—with the citation of the established fact that "rest" has not improved a single patient. The disease is widespread, and, as everyone knows, not at all confined to the telegraphic profession. Occupations so diverse as piano players and ordinary "copyists" carry the disease with them, and milkmaids and shoemakers "lose their grip" as regularly as we telegraphers do; so much so in the case of the humble Crispin that Appleton's Cyclopaedia says the disease is also known as "Cobbler's Spasm."

But, while all believe in its existence, few can agree upon the most likely method of curing it. In my own mind I doubt very much if there is any cure, though I believe that by a judicious saving of nerve-power its progress may be arrested, or at least retarded, and complete disablement postponed for some years. This much, I believe, the alphabet proposed by Mr. Phillips will accomplish, being, as he has so plainly demonstrated, less exhaustive of nerve-power. He gives us no cluster of dots beyond three in number, and it is admitted on all sides that the polydot character is the veteran foe of a palsied arm. Several of the best operators of my acquaintance aver that dashes afford a brief "rest" for their arms while they invariably break down in attempting the vibrations of a "p" or an "h." In this respect Mr. Phillips has displayed his usual tact in selecting the firmest and most musical of the figures

to do duty in place of spaced letters, supplying the places of the former with equally solid symbols. His punctuation, where it is changed at all, suggests itself, as, for example, Xn for exclamation, and Pf for paragraph. His alphabet is shorter than the Continental, and does not exact any of the numerous transpositions which the adoption of that code would. It is shorter even than the Morse now in use by us, if we count the time occupied by "spaces," which certainly should be counted. So far it is superior to both, and even were it shown that it is not less productive of ganglionic affections, I would still maintain that the present spaced letters, teeming with imperfections, and especially the barbarous drum-beat of the six-dot character, should be abolished.

There could be no mistakes with Mr. Phillips' code such as he has pointed out in the use of the present split characters. An example of this may be found in a circular issued by the Western Union Telegraph Company about two years ago, giving the probable cause of errors. Of 172 errors in which suit for damages had been instituted against the company, only forty were in ordinary words, while the remaining 132 were in "number" words; errors arising from the similarity of telegraphic characters in such words as, fifty and fifth, sixty and sixth, seventy and seventh, etc. I would maintain that a correct transmission of messages is impossible with such shoals as these to wreck us, and to point to the 132 out of 172 errors (in every one of which cases, be it remembered, suits for damages have been instituted against the company) for evidence. A glance at Mr. Phillips' alphabet will demonstrate the impossibility of such errors as those above mentioned. We will be told now by the opponents of a change that an average operator may work the present Morse system with accuracy if he chose to be careful; but, if we adopt a better code, we can then say he must work it with accuracy since, by the very nature of the change (while steering clear of error is now a pure matter of adroitness and clairvoyancy) it would then be a difficult matter not to work correctly.

I think that much of the opposition to a judicious change in the alphabet is due rather to the personal disinclination of operators to learn it, than to any logical reason against it. It is argued that a change would be productive of confusion, and retard for a time the telegraphic business of the country. In answer to this I might point out that Mr. Phillips' code was introduced on the Associated Press wire in two or three days, and that it is now used as easily, and with less liability to error than the Morse. With regard to the hopeless muddle which it is claimed two alphabets would make in the telegraphic brain, it should be sufficient to say that there are several operators of my acquaintance familiar with four alphabets, and who work them interchangeably. I myself have changed alphabets three times—one of the changes being the difficult one, full of transpositions, from Continental to Morse—and I have never regarded the task as an annoying or perplexing one. Yours respectfully,

JOSEPH CHRISTIE.

PHILADELPHIA, March 21, 1878.

There is a coterie of advanced thinkers, men with hobbies, lunatics, and semi-lunatics, in this city, who have banded together under the comprehensive title of the "Liberal Club." It is the habit of this band of antagonistic thinkers to invite some well known man to lecture before them, and when the speaker has concluded his discourse members of the club are given ten minutes each in which to respond. At first glance it would seem as if the lecturer would undergo an unpleasant experience, but this is not the case to any great degree, for the members who respond merely refer to what has been said as "bosh, humbug," and the like, and at once begin to air their respective theories and make an exhibition of themselves, until, in the midst of a wordy harangue, they are one after another shut off—I might almost say shut up—by the fall of the presiding officer's gavel. One of these gentry is said to have a theory that canned lobsters may profitably be engrafted on the tea plant, and whether the subject up for consideration is "The Immutability of the Soul," "The War in the East," or what not, the assemblage invariably hear all about those canned lobsters and the tea plant.

Your correspondent "Bluestone" seems to be the counterpart of this Liberal Club man. He disdains to argue a question. "It is useless to look for a remedy for operators' paralysis in the direction that Mr. Phillips suggests. I believe that the only cure

is relaxation," he observes with owlish wisdom. I am just a little surprised that he did not add: "And that settles it." If the cheapness of his methods needed anything further to demonstrate it than his abstinence from the employment of logic, his use of what I shall take the liberty to call "manufactured evidence" would be sufficient. He says: "The late eminent Dr. Hall, of New York, and most medical men of skill, hold the same opinion." I have not yet ascertained when and upon what occasion Dr. Hall gave his attention to telegraphers' paralysis, and I am loth to believe that the subject has engaged the attention of "most medical men of skill," particularly in relation to relaxation.

It is for these reasons that I think I see in "Bluestone" a man of canned lobster and tea plant proclivities. He believes in eight hours' work, two weeks vacation for day men, and three for night employes "with pay." In these circumstances he maintains that there would be no paralysis, and if space had permitted, I suppose that he would have gone on to show that given short hours and vacations with double pay paralysis and sciatica could be warded off, while treble pay, I presume, would be a safeguard against consumption, small pox, chills and fever, etc., etc. As I shall presently show, relaxation, when tried, does not seem to have the desired effect. Regarding "Bluestone's" theory, I have to say that when the question now before us shall have been disposed of, and the changing of telegraph lines from their position in mid air to a secure place beneath the earth's surface, or some kindred topic is up for consideration, "Bluestone" will probably be found to the fore with his innocent prattle about canned lobsters—I mean eight hours' work, two weeks' vacation, with pay, etc., just as he is now.

I have never been an advocate of long hours; and I believe so thoroughly in vacations, that I always take a long one at my own expense, whenever my employers will not accord me one with pay, and the rule I apply to myself has generally been applied to those serving under me either as operators or in any other capacity.

Touching the matter of relaxation, it would be fair for me to meet "Bluestone" with assertion since that is the best that he has offered in reply to the evidence given in my first communication. Indeed, I am fearful, from "Bluestone's" signature, that he is more familiar with batteries than he is with the sounder and key, so completely does he ignore—not what I say—but what I have stated as the opinions of men of intelligence and experience who have given the matter careful study. But I will not confine myself to assertion, since facts are ready at my hand.

The disability of a gentleman of my acquaintance, with whose suffering I am as familiar as if it were my own, was brought about in the following manner:

He entered the profession in 1862, and, after eight years of service, during which time he never worked more than an average of seven hours a day, treating himself every year to an aggregate vacation of from four to seven weeks, he left the business in 1870 an expert in every sense of the word, and established a country newspaper. In this role most of his time was passed in the open air, soliciting business for his paper, and his usually good health became excellent. Disposing of his business after a time, he sought temporary employment at No. 145 Broadway. Here, while working a press wire, with easy hours, he was seized five months later with paralysis of the wrist, and in the four years that have since elapsed he has not improved in the slightest degree as a sender. Unless "Bluestone" insists that relaxation should be availed of in quantities fixed by mathematical rules, and maintains that my friend took too much, I cannot see whereby we are to be benefited by the prescription given.

Mr. Albert Rhodes says somewhere that there are men whose vision is so obstructed by the shining disc of a dollar, that all other objects are rendered invisible. May it not be possible that the "blessed boon" for which "Bluestone" is pining has closed his eyes to the ills of his brethren, and dulled his appreciation of other's efforts to discover a remedy for a disease which is rapidly increasing, though as yet it is but imperfectly understood?

Very respectfully yours,

WALTER P. PHILLIPS.

NEW YORK, MARCH 18th, 1878.

THE CONTINENTAL ALPHABET.

Would it not be a good idea to publish the Continental alphabet in full in your next, so that those unacquainted therewith can compare it with

the Phillips? I think the general feeling is in favor of adopting the Continental should a change be made. Respectfully,

T.
OSWEGO, N. Y.

The alphabet and figures are as follows:

A, ---	J, ---	S, ---	2, ---
B, ---	K, ---	T, ---	3, ---
C, ---	L, ---	U, ---	4, ---
D, ---	M, ---	V, ---	5, ---
E, ---	N, ---	W, ---	6, ---
F, ---	O, ---	X, ---	7, ---
G, ---	P, ---	Y, ---	8, ---
H, ---	Q, ---	Z, ---	9, ---
I, ---	R, ---	1, ---	0, ---

Tom Edison's Operating Days.

The marvellous discoveries of Prof. Thomas A. Edison, says the *Sun*, have excited universal interest. His stock indicator, automatic and duplex instruments, telephone, electro-motograph, airograph, electric pen, and, above all, his speaking phonograph, mark him as the Napoleon of inventors. Indeed, at the Professor's age, Bonaparte had barely reached the rank of First Consul. As any particulars concerning the history of this extraordinary young inventor must prove of more than usual interest, the writer details a conversation with Mr. George S. Stewart, better known as "Fattie" Stewart, an old telegraph operator, now employed in the office of the Associated Press:

"I first knew Tom Edison," said Mr. Stewart, "in 1866. At that time I was an operator in Tennessee. Tom was employed by Col. Coleman, the Superintendent of the Western Union at Memphis. He was a gawky boy, about eighteen or nineteen, and was reading everything about electricity that he could pick up. He had a lean and hungry look, and always seemed to be under the influence of some secret excitement. He had got into his head the idea of sending duplex dispatches, and all his spare time was devoted to experiments in the office. Coleman stood it for some time, but at last began to growl. He believed that Tom was crazy, and said that 'any damned fool ought to know that a wire can't be worked both ways at the same time.' He declared that he wouldn't have Tom puttering around the office with such silliness, and finally discharged him in disgust. The boy went back home to some town in Michigan, and I lost track of him. 'Some time afterward I was transferred to the Boston office. At that time wire No. 1, as it was then called, was considered the crack wire of the country. The fastest men were working it. For some cause the operator in Boston resigned. It was difficult to find a man to take his place. A half dozen fellows tried it but found it too much for them. One after another they dropped it like a hot potato, and retired wiser than when they came. There was a man in the office named M. F. Adams. He thought the world of Tom Edison, and recommended him for the place, vouching for him as a first-class operator. G. F. Milliken, the manager, telegraphed to the little town in Michigan, asking Tom if he would come on and accept the position. Tom answered yes, and without further words started for Boston, via the Michigan Central and Grand Trunk Railroads. In running through Canada he got snowed up, and was kept on the track in one spot for twenty-four hours, cold and hungry, without a bed. As usual, he owned but one suit of clothes, and that was on his back. Unfortunately, it was a summer suit. He might have frozen to death had he not bought an old rough roundabout overcoat from a Canuck railroad laborer. But he finally got through all right."

"I was in the Boston office when he arrived, and I must say," continued Mr. Stewart, bringing his fist down upon the table, "that he was the worst-looking specimen of humanity I ever saw. The modern telegraph tramp isn't a marker. He wore a pair of jean breeches six inches too short for him, a pair of very low shoes, the Canuck jacket, and a broad-brimmed butternut hat, a relic of his life in Memphis. The wide rim was badly torn, and hung down so that you could see his ear through the opening. There was the slightest trace of dirt on his upper lip, that he called a mustache. His hair hadn't been combed for a week, and he wore the blackest white shirt that was ever seen on the back of a human being. Nervously pinching his upper lip—a habit that he had—he inquired for the manager, and was sent to Milliken."

"Are you the boss?" Tom asked. Milliken smiled and said he was manager. Tom then introduced himself, and asked when they wanted him to go to work. Milliken stared at him as though he

couldn't believe his ears, and said 'at half-past five.' It was then well along in the afternoon. Tom began to look around the office for a clock, and Milliken said: 'Young man, you have to work a pretty heavy wire.' Tom gave what he called his mustache an extra twist, and with all the assurance in the world blurted out, 'All right, boss. I'll be here at half-past five.' He slid off so quick that it made Milliken's head swim.

"The operators burst into a peal of laughter. They had seen and heard everything, and their remarks were anything but complimentary to Tom. 'Oh,' said one of them, 'he won't last as long as that Jerseyman that tried the wire the other day.' 'Why, that fellow can't read by paper, let alone by sound,' shouted another. A third declared that Tom was 'the worst he ever saw,' and when a fourth wondered 'how the walking was between Michigan and Boston,' there was a general roar.

"Well," continued Stewart, "half-past five came, and so did Tom. Everybody was on the *qui vive*. Milliken was just taking from the vault the supply of blanks for the night operators. As Tom came up he pointed to the pile of them, saying, 'Take what blanks you want and I'll show you your table.' Tom innocently picked up the whole bundle and followed Milliken to the table. The operators began to grin and snicker. They all thought that he would get discharged after trying to catch one message. It was the No. 1 wire to New York. Jerry Borst, then considered one of the fastest senders in the country, worked the New York end. As Tom seated himself he heard the call 'B,' and turning to Milliken asked if that was the call for Boston. 'Yes,' replied the manager, watching Tom's movements with intense curiosity. Thereupon Tom opened his key and ticked the answer, 'I, I.' Jerry began to 'whop 'em up' in his best style, and every eye was turned on Tom. He displayed no anxiety, but kept right along at his work as though he had been taking Jerry all his life. For four mortal hours did Jerry keep it up a hundred pounds to the square inch, and four mortal hours did Tom take it down in a handwriting as neat and plain as reprint. For the first time in his life Jerry had rushed it until he was tired, without a break from the receiver. He was astounded. When he had finished, the following messages passed between them:

Jerry—Who the deuce are you, anyhow?

Tom—I'm the new man. My name is Tom Edison.

Jerry—Well by [a ripper] you're the man I've been looking for for the last ten years, and you're the only man I ever found that could take me without a break. Shake.

"And they shook. The astonishment of the boys in the office was unbounded. There was no more jibing nor snickering. Everybody was Tom's friend at once. The next day Milliken picked up a sheet of Tom's manuscript, and reflectively stroked his long beard. 'I never saw such pretty copy,' he said. 'He is as good an operator as I ever met.'"

"At the close of the first night's work, Tom's friend Adams took him home with him. The first question asked was: 'What kind of a man is this Milliken? Do you think he'll let me experiment in the office when I'm not on duty?' Adams replied that Milliken himself was somewhat of an inventor, and he thought that he would not only let Tom experiment as much as he pleased, but that he would also take a personal interest in his experiments. The very first trial was the duplex dispatches that gave Tom the reputation of a lunatic in Memphis, and caused him to lose his situation. Milliken, unlike Coleman, entered into the spirit of the thing, and in a short time Tom had so far perfected it that he worked it quite successfully between New York and Boston. But to accomplish this he spent every dollar he earned for material for the experiments, and when the grand secret was discovered hadn't money enough to pay for filing a caveat for a patent."

Stewart says that many persons witnessed Tom's experiments. Among others he mentions James G. Stearns, then President of the Franklin Telegraph Company. Stearns appears to have dropped on Tom's secret, and he had money enough to carry out Tom's ideas. At all events, he got a patent ahead of Tom, and reaped a large proportion of the benefits. To-day his instrument is used extensively in this country and in Europe, and he is worth hundreds of thousands of dollars. Tom, however, got full credit for the invention of the duplex system through the news and editorial columns of the *Telegrapher*. It was Tom's first newspaper notoriety, and he was greatly elated. He flourished a dozen copies of the paper over his head, and an

nounced his intention of mailing them to Coleman, "to show him that the damned fool had actually succeeded in sending messages both ways at the same time on the same wire."

But Tom jumped from one invention to another, apparently utterly regardless of their pecuniary value. It was while he was in the Boston telegraph office that he invented the gold and stock telegraph indicator now in general use. In this case he pursued his experiment privately, and had money enough to get the invention patented. To-day it returns him a handsome royalty.

Fattie Stewart tells many amusing stories of Tom's career in the Boston office. His strange ideas and odd expressions gave the boys an inexhaustible fund of merriment. Pat Burns, now dead, was working nights in the Boston office, and attending Harvard law school in the day time. Burns was a magnificent operator, and was awarded Prof. Morse's gold key in the telegraphic contest years ago. He was a brilliant conversationalist and passionately fond of argument. For the sake of it he was eternally getting up disputes with the boys in the office. Edison admired Burns's gift of gab, and when Burns was in the heat of an argument was wild to hear him talk. As Tom was quite deaf he could not catch the conversation at a distance. At such times he would disable his wire. His favorite method was to "ground" it under his table. While the chief operator was cursing and swearing and testing for the "ground," Tom would be off pulling at his upper lip and listening to Burns. The argument concluded, he would return to his table, take off the "ground" that the chief operator had failed to find, and innocently announce that the wire had come "O. K."

The Boston office was overrun with cockroaches, and Tom was much annoyed by them. With ready ingenuity he conceived and carried out a plan for their extermination. He tacked several zinc strips to the wall, at intervals of an eighth of an inch. He then applied the positive and negative poles of a battery alternately to the strips. He next smeared the wall above the strips with molasses. The roaches came up in platoons, very much after the manner of the British troops at Breed's Hill. As they stepped from strip to strip they "closed the circuit," received the full benefit of the electric shock, and dropped dead by scores. Tom used to catch their bodies in a water pail, and it is said that the bucket has been filled in a single night.

"Tom was naturally speculative in his ideas," said Stewart, "and the No. 1 wire kept him so closely employed during working hours that he hadn't any time for dreaming. One night he got into a discussion with the operator who worked the wire that connected with the old Atlantic cable at Plaister Cove. There was mighty little cable business in Boston, and Tom jeered the operator on his 'soft snap.' All he had to do was 'tend a repeater that was used only when the state of the atmosphere interfered with the working of the regular wire. The man was a first-class operator, and as he had got a little out of practice he thought a month's dash at Tom's wire would do him good. So, with Milliken's consent, they changed 'tricks.' Tom thus took the 'early trick,' from 1 to 8 A. M., and the cable operator took his place on No. 1. Tom found it more of a change than he had anticipated, for he was fond of lively company, and between the hours of 1 and 8 in the morning there were very few operators at work, and the office was as silent as the grave. So he went to dreaming in earnest. I can see him now sitting at his desk, pulling at his upper lip, and vacantly staring at the wall. His thoughts seemed concentrated on something beyond him—something apparently out of his reach. He's got there since, but he seemed to be a long distance from it then. After 2 A. M. he was left almost entirely alone. He was always somewhat musically inclined, and to relieve the monotony of the early morning hours he got some fine wire resembling the hair spring of a watch, and attached to his instrument in such a way that it sounded like an Æolian harp. And there he would sit through the long morning hours listening to this sad sweet music, utterly unconscious of what passed around him. Eventually, however, this novelty wore off, and he began to look for a fresh source of amusement."

"About this time," continued Stewart, "an order was issued that each night office at hourly intervals, between 1 and 8 A. M., should telegraph 'O. S.' to the New York office to prove that each operator was awake and at his post. After his musical experiment became cold, Tom had fits of drowsiness, and, while indulging in a nap one night, the regular wire 'busted' east of Boston, just before the hour

for answering 'O. S.' to New York. The chief operator at the New York end called 'Boston for test.' Poor Tom was fast asleep, and it was some time before he awoke. He found the deuce to pay. He very quickly substituted another wire for the one that had 'busted,' and was lucky enough to get out of the scrape with an admonition never to be caught napping again. But he took instant measures to protect himself, and enjoy his naps. The office boy, Johnny McFarland, knew the call. Tom took Johnny into his confidence, and Johnny promised to awake him on call. But the 'O. S.' business still cut him out of a square snooze, and he determined to get over the difficulty. He invented and attached a mechanical contrivance to the connections of the wire that would open and close the circuit and say 'O. S.' to New York, and sign his call 'B.' as regularly as the hour came round. Young Johnny faithfully awoke him when he heard any one call 'B,' and after that Tom slept as sweetly as an infant.

"Tom's working the 'late trick,' as the boys called it, gave him the day and part of the night to himself. He rented a room on Doane Street in the rear of the Western Union office, and spent most of his time experimenting with everything that he could get that had any relation to electricity. His room was filled with old relays, sounders, wire of every size, length and description, magnets, repeaters, insulators, batteries, blue vitriol, acids, and books on electricity. His right-hand man was his old friend Milt Adams. In those days Tom was so taken up with his experiments that he spent upon them every cent he could raise, and went so far as to wear a shirt a month to save the price of washing. It was in this office in Doane Street that he perfected his gold and stock indicator, and I reckon got the ideal groundwork for all his inventions."

At the end of the month the cable operator "weakened," and Tom returned to his old wire. His inventions, however, proved so valuable and remunerative that he resigned his position in the Boston office, and came to New York, where he quickly took the front rank among electricians. Stewart went South and lost track of him, but frequently heard of his surprising inventions.

"Three years afterward," he says, "I met him in front of the *Herald* building. To my surprise he wore a plug hat, but it looked as though it had been stolen from some procession on St. Patrick's day. He was glad to see me, and asked all sorts of questions about what the Southern operators thought of his discoveries. I told him they were overjoyed at his success. He told me that he had got married, and in comparing his situation with the position he held in Boston, exultingly pulled three bank books from his pocket, and showed them to me, saying that he didn't feel 'quite so poor now as when in Boston, pounding brass with old Jerry.'"

Indignant Telegraphers.

The usually placid current that flows over the lines electric of the Western Union Telegraph Company is beginning to exhibit symptoms of a storm—a storm more ominous in its character so far as the company's interests are concerned than any of atmospheric nature that sometimes interrupts the harmonious working of the wires. In other words, a general strike of the operators at no distant day is stated to be anything but improbable. The seriousness of such an event becomes apparent when it is taken into consideration that from Maine to California the operators are numbered by thousands, all bound together by the same ties of common interest, and all, or nearly all, in practical simultaneous communication. The occasion of such an occurrence, if one should take place, it is charged, will be the enforcement of the recent general order of the company directing a gradation of salaries in every office, to take effect on April 1st. This gradation, the operators assert, is simply a subterfuge for another general reduction. The feeling against it is exceedingly strong among the knights of the key, and already the rumblings are being heard outside the operating room. The gradation will, if put into effect, result in a saving to the company in the New York office alone of about \$500 per month out of the operators' salaries. A few will be slightly benefited, it is claimed, but the mass will suffer.

In speaking on the subject to a *Herald* reporter yesterday, an old operator, who has spent many years in the service of the Western Union Com-

pany, said: "If it was in reality a gradation neither I nor any other operator would object to it, but it is not. It is merely a blind and a subterfuge. The company know well enough that we earn every dollar."

What makes the operators particularly indignant is what they are pleased to term bad faith on the part of the company.

"How is that?" queried the reporter.

"Well, you see, when the Western Union was fighting the Atlantic and Pacific they came out with bulletins asking their operators to stand by them in the fight, and intimating that we would not be forgotten. We did stand by them. We worked day and night. Every man did his level best. The wires never before hummed so with business. Well, after the Atlantic and Pacific was bought in we heard nothing from the company. Our salaries were then at starvation prices, but no advance came, and now they talk of 'grading' us. I tell you, if the company were wise they would not do such a thing."

Another representative operator was equally indignant at the proposed reduction. Said he: "It takes three years of hard and diligent application to become a first-class operator, and there are thousands who never become first-class. We are held to the strictest accountability for our work. Oftentimes the mistake of a single letter in a dispatch, and I tell you it is very easy to make a mistake, would cost the company thousands of dollars. I do not know who the men are that propose this new reduction, but I think that the stockholders will regret it if it takes place. They will lose much more than they will make."

"Do you refer to any proposed strike?" asked the writer.

"I've got nothing to say about strikes. When the operators struck in 1870 they acted unwisely. They struck in a dull season and without proper preparation, and although the strike cost the company thousands and thousands of dollars the operators were eventually defeated. But if another strike should take place the operators would profit by their experience of 1870. There would not be any such thing as haste or striking in a dull season; and further, there would not be any such a thing as failure."

"But we don't want to strike," continued the operator; "all we ask from the company is fairness. We want only proper compensation for our labors. Is it not better for the company to have men who take an interest in their work than men who feel they are imposed upon? The former will work faithfully and efficiently. The latter will shirk and get the company into trouble. No; all we want is justice. We don't want to strike or to get up any league or organization; but there's a limit to everything."

A conversation with several other operators elicited only reiterations of the foregoing sentiments.

In every instance the operators expressed a hope that the gradation order would, on consideration, be rescinded. Referring to their collaborators in other large cities, they said that the feeling against the gradation was everywhere intense. The proposed gradation, it is claimed, will make the salaries of male operators average \$74, female operators \$42, and clerks \$35 per month.—*N. Y. Herald*.

THE TELEPHONE IN WAR.—In a recent lecture on the telephone in London Mr. Prece said that the telegraph had now become a necessity of the age, both in peace and war; in fact no great military operations could be undertaken without its aid. Owing to the necessary mode of transmission, telegraphic messages were peculiarly liable to error, but the telephone would obviate this by placing in the officer's hands an instrument capable of transmitting the actual words and tones of his correspondent. Distance was no object, provided the wires worked by the telegraph were not in immediate proximity. Mr. Prece stated that by means of the telephone a sigh could be wafted "from India to the pole." In the "field" the best conditions for its working would be obtained, lines being laid in all directions undisturbed by extraneous influences. The words of command, moreover, would be uttered by the general, and the very tones in which they were spoken would be conveyed to his subordinates.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

April 1st, 1878.

THE grading question—How much was your salary reduced?

THE widow of the late George H. Mumford has just been married.

It's off-all the way the Western Union grades its operators' salaries.

LEONA asks us for the truth of history to state that the Chicago operator suspended on suspicion of writing the "Argus" letter has been re-instated at a reduction of ten dollars a month, and taken from the regular staff, and put on a "split trick," where if he gets in full time he may thank the gods of commerce for it.

Now that it has been clearly shown that unless operators change their alphabet, telegrapher's paralysis will claim them for its own, cannot somebody convince the "considerate, high-minded, and intelligent" executive committee of the Western Union that unless they abandon the present idea of grading salaries, an unprecedented mortality in the ranks from paralysis of the pocket book will surely follow.

MR. JESSE H. BUNNELL has withdrawn from his connection with Messrs. L. G. Tillotson & Co., and is engaged in fitting up for electrical manufacturing at his new quarters, 112 Liberty Street, where he expects very soon to be ready for business. He leaves Messrs. Tillotson & Co. with their best wishes for the success of this enterprise, which he has had in contemplation for a long time. His advertisement will appear in our next.

WE always did know that operators were ever impatient for the arrival of THE OPERATOR, but now we are pleased to find that they are not the only ones. On Sunday, March 17th, a prominent superintendent who could not await the slow process of the mails, ensconced himself in his private office while the chief operator of the same office had New York telegraph him a synopsis of two letters published in our last issue, in which the pair were interested. Then both had a long consultation, the result of which the deponent sayeth not.

MR. JOSEPH S. ASHBURST, manager of the Messenger Department of the American District Telegraph Company in this city, and a gentleman highly esteemed in telegraphic circles, died at his residence in Jersey City, March 20th. The remains were taken to Newburgh, his former home, March 23d. A large number of telegraphers and other friends of the deceased followed the procession, which was headed by a platoon of boys thirteen deep, while others were formed in a hollow square about the hearse, the third platoon following in front of the coaches.

The Modern Sliding Scale.

We publish in another part of this paper an article from the New York Herald, showing the dissatisfaction that exists among the operators of this city as a consequence of the late so-called gradation—or perhaps degradation would be a better word—of salaries by the Western Union. A vigorous editorial on the same subject from the Cedar Rapids Republican will also be found in this issue.

The officers of the Western Union say that the various superintendents have been instructed to establish a series of grades among the operators and other employes, and to graduate salaries to correspond. In no case, they have been careful to impress upon superintendents, are the aggregated salaries of any office to exceed its present expenditures for that purpose. These great philanthropists say that no sweeping reduction of salaries is contemplated by the change, though it is shyly added that they expect that a trifling saving to the company will result from it. The great object, they assure us, is to systematize matters, so that, as nearly as possible, those employes who do the same amount and kind of work will receive the same pay and be classified in the same grade in all offices. Owing to the absence of classification, they say, many men in the employ of the company were inadequately remunerated for their services, while others were overpaid. Verily, this is but too true. There is scarcely one operator in a hundred who is not inadequately remunerated, while friends of officers and directors are given offices that are mere sinecures, and for which they are notoriously overpaid.

The officers state that the rate paid men of equal ability for the same kind of work often exhibited a marked discrepancy, and that this apparent injustice had become so pernicious in its effects upon the interests of the company and the welfare of its employes, that the attention of the managers had been directed to the proper mode of correcting the evil, with the result stated—the issuance of the above referred to instructions to the different superintendents. The discrepancy is easily accounted for. The Western Union for several years has been steadily reducing salaries by paying a lower remuneration every time positions were changed. While in some cases ill health or the force of circumstances necessitated a change, in many again, operators were suspended for some trivial offense, and subsequently reinstated at a reduced salary. The Western Union now makes the discrepancy in salaries thus occasioned an excuse for reducing the remuneration of the men who remained faithfully in its employ, and did not change their positions often enough to suit it. In most lines of business long service is rewarded, but with the Western Union the very opposite seems to be the case.

We are told that the reduction in salaries, if any, obtained by the contemplated adoption of a regular system of classification will be insignificant, while the benefit arising to the company in the increased efficiency of its service will be incalculable. The employes, feeling that they are equitably rewarded for their efforts, will, it is thought, by greater diligence show their appreciation, the result being the company's decided gain. The proposed classification is based, we are assured, on a regular grade of position, to which men will be assigned according to the com-

petency they display, and the essential principle governing the system will be promotion according to merit; the men being thus left to decide for themselves as to the place they will hold in the service.

The matter of grading has been left wholly to the judgment of the different superintendents. They are called upon to decide the matter, being expected to base their decisions upon the cost of living in their respective localities, the amount of work done by their several offices, in comparison with those of other cities and towns, the size of their various districts, etc. The great object, it is contended, is to systematize matters, so that those employes who do the same amount and kind of work as others will receive the same pay and be classified in the same grades in all offices.

The grading of salaries, properly so called, would be welcomed by almost every operator in the service. The system—or want of system—that has so long prevailed was detrimental to the interests of both employes and employer. An operator had no incentive to push onward and upward in his profession. His salary was fixed, and so it would remain no matter how capable he should subsequently prove himself, or how deserving of an increase. Did he know that just so soon as his services became of greater value to the company, they would be adequately recognized by promotion to a higher class, with a proportionate increase of salary, we should find him prouder of, and more interested in, his business, more careful and painstaking, and more actively solicitous for the welfare of the company. His spare moments would be spent in electrical study and general improvement, and not in preparing to leave telegraphy at the first opportunity, to seek a more congenial and remunerative occupation, where efficiency and faithful service are appreciated, and talent and energetic good conduct do not go for naught.

A Western Union Director's Visit to The Operator Office.

About one o'clock on the day after our last issue, as Mr. Couch, foreman of the office, and business manager of THE OPERATOR, during the publisher's absence was opening some letters just received in the mail, a young man of about 25, with a dark moustache, good looking, richly, though not particularly gaudily, and tastefully dressed, with a dashing air walked in and inquired:

"Is this the office of THE OPERATOR?"

Mr. Couch assured him that it was.

"I want to subscribe for THE OPERATOR," he next remarked. "I want to keep posted on what's going on in the telegraphic world."

"You certainly take the very best method of doing it," remarked Mr. Couch, with a patronizing smile. "Please give your name to the subscription clerk over there," and he continued opening letters.

"Glancing up and noticing the stylish cut of the visitor's clothes, Mr. Couch communed thus with himself: "I hear great talk about sliding scales and gradings, but it takes considerable money to dress like that. I suppose that natty knight of the key spends every cent he earns on dress. He's a handsome enough fellow, but, I'm afraid, puts on more style than either his salary or his station in life warrants."

"Who writes the articles in THE OPERATOR?"

inquired the visitor, returning to Mr. Couch's desk.

"Mr. Johnston writes the editorials, and numerous others contribute to the rest of the paper," was the reply.

"Who wrote that article?" pointing to one headed: "Salary Grading Another Name for Reduction?"

"I really don't know, and should not be at liberty to tell if I did," replied Mr. Couch.

"I wonder if the fellow knows what he's talking about? That does me injustice," and he pointed to the words: "the men (?) who are doing the dirty work being young Twombly—who not long ago married Vanderbilt's daughter, etc."

"My name's Twombly, and I'm a Western Union Director."

This Mr. Couch conceived to be that species of joke known among telegraphers as a "stiff," and looking up, laughingly, into Mr. Twombly's face—of course all the time believing him to be an ordinary operator, who dressed a little beyond his means—said:

"So you're married to Vanderbilt's daughter, are you?"

"Yes, sir, I am," replied Mr. Twombly.

"Has the old man any more left?" inquired Couch, with a roguish leer. "I wouldn't mind marrying one of them myself!"

Mr. Twombly laughed very heartily and good humoredly at this sally, and just then it began to dawn upon Couch's mind that it was just possible that he might be conversing with W. H.'s son-in-law.

"Who is the editor-in-chief of THE OPERATOR? I should like to have a talk with him," was the next question.

"Mr. Johnston is, but he went out of town last evening and will not be back to-day."

"Does he publish one side of a case only, without giving the person accused a chance to state their side. I suppose if I was an older man I shouldn't mind it; but I don't like people to have a bad opinion of me."

"On the contrary, Mr. Johnston invariably gives both sides an opportunity of being heard, as evidenced in the recent Chicago matter. I'm sure if you'd write him a statement of the case he would be only too happy to publish it, if he thinks that injustice has been done you."

"Well, it's hardly worth while going to so much trouble about it. I shall probably call some time and see Mr. Johnston," and Mr. Twombly bade those in the office a pleasant good morning and went out.

Mr. Couch was very favorably impressed with Mr. Twombly's address and manner, and considers the fact of his mistaking him for an ordinary operator the richest joke of the season.

It would give us pleasure to meet Mr. Twombly. We should like to suggest to him that he and those whose interest in the Western Union he watches are wealthy enough to forego the amount that will accrue to them from such a reduction of salaries as the late so-called grading, while the amount of pinching, of superhuman efforts to make both ends meet, perhaps of downright suffering, that such an order entails, is no light matter to the thousands whom it affects. Why should Capital thus wantonly crush, with its iron heel, the Labor upon which its own prosperity depends? Why should men who can count their wealth by millions desire to add to their store at the expense of their fellow-men whose lot in all conscience is already hard enough?

Telegraphers' Paralysis.

The first case of telegraphers' paralysis to which attention was called through the press, was reported about three years ago by a French physician. The English papers regarded the new malady with some alarm, and reference was made to it at the time in a few newspapers in this country. Since then nothing further has been heard of the matter until the discussion on the subject last summer in the *Journal of the Telegraph*, and more recently in THE OPERATOR. The case reported by the French physician, above referred to, was that of a Parisian operator, who, having worked at the key for nine years, found that he could not form clearly the letters U, I or S, which letters, by the way, are the same in the Continental as in the Morse alphabet. On trying to trace the letters his hand became stiff and cramped. He then endeavored to use his thumb alone, and this succeeded for two years, when his thumb was similarly attacked, and he subsequently tried his first and second fingers, but in two months these were also paralyzed. Finally, he had recourse to the wrist, which also shortly became disabled. If he forced himself to use his hand, both hand and arm shook violently, and cerebral excitement ensued.

M. Bouillard, an eminent French scientist, who has devoted considerable attention to the subject, gives it as his opinion that it is an affection of the brain, and not of the arm. He asserts that the three faculties which essentially distinguish man from other animals—speech, reading and writing—are each controlled by separate portions of the brain. In his researches he discovered that the paralysis of one of those functions could exist without the others being affected, and he gives as an example a case in which he was called to a consultation on a young man whose avocation compelled him to write continually. At first the patient had felt a slight weakness in writing, then a great difficulty, and finally, an absolute loss of the faculty. The result of the closest examination could not detect any defect in the muscles of the arm or hand, the latter retaining all its sensitiveness and power for every other purpose than that of writing, and all his other functions being normal and in good condition. The conclusion arrived at was that the source of the infirmity must not be sought for in the external organs, but in the centre itself of nervous action—the brain. The young man was advised to learn to write with the left hand, which he rapidly succeeded in doing. The defect from which he suffered had long been known as writers' cramp, just as the loss of speech was for centuries termed paralysis of the tongue. Both designations were equally erroneous, both being now attributed to maladies of certain portions of the brain.

The Pooling Suit.

The A. & P. Company, by order of Judge Lawrence, has been made a party to the defence in the action brought by E. C. Benedict to set aside the pooling arrangements between the Western Union and A. & P., as already reported in THE OPERATOR. The suit was argued at length before Judge Lawrence, in Supreme Court Chambers, on Tuesday and Wednesday last, on a motion by the plaintiff for an injunction to restrain the Western Union Company "from executing or carrying into effect certain resolutions and acts of the Board of Directors, and arrange-

ments made under them, whereby for 20 years from August 20, 1877, the gross receipts and expenses of both companies are to be pooled," etc. Benedict is a stockholder of the Western Union, and says that the effect of the pooling arrangement is to require that company to pay out about \$40,000 a month to the Atlantic & Pacific Company without receiving any corresponding benefit. He also claims that the arrangement was not the act of the stockholders, and that even if it were, it would not be valid, because it is against public policy. One result of the arrangement, according to him, has been that rates to the extreme competing points of the two companies have advanced 282½ per cent. since August last. In opposition, the affidavits of E. D. Morgan, William Orton, and others were put in, which state that the pooling arrangement has been for the best interests of both companies; that the stock of the Western Union has advanced since the arrangement was made, and that in general the average rates have been reduced since that time. As a matter of law, on behalf of the defendants, it was claimed that they were authorized to enter into the arrangement under the act of 1870, which provides that a telegraph company "may lease, sell, or convey its property, or any interest therein," to another.

Judge Lawrence took the papers and reserved his decision.

THERE will be 578 American exhibitors at the Paris Exposition, representing 24 States. The exhibit of electrical goods and apparatus is exceedingly slim. Neither L. G. Tillotson & Co., Partrick & Carter, nor The Western Electric Manufacturing Company are represented. We do not even see that the Bell Telephone is to be on hand, though Elisha Gray is to exhibit his. Thomas A. Edison is entered for telegraphic instruments, which, it is to be presumed, will include his telephone, phonograph, etc. A. G. Day exhibits his kerite covered wire. Dr. J. Byrne, of Brooklyn, will send over a very excellent electro battery, of which he is the inventor, and which elicited high encomiums during the Centennial from Sir William Thomson, Dom Pedro, and others, on the occasion of the first exhibition of the Gray and Bell telephones. The only other electrical exhibit is electro-plating apparatus by The Western Dynamo-Electric Machine Co. of Newark, and gas lighting machines by C. H. Pond, of this city.

THE Western Union reducing salaries under pretext of grading! You must be mistaken. Did not that company's official organ distinctly say that under a single management the telegraphs of the country could be much more economically conducted, thus leaving a larger margin for profits, and that the salaries of operators would be "apportioned accordingly?" And did not the company assure its employes that it "would not forget their honorable and manly conduct" on the occasion of the strike of 1870? Surely, no individual possessed of a spark of honor would take so contemptible a means of reducing the salaries of faithful employes after such promises.

THERE is a prospect of a new Western Union office in Washington. The company has leased a part of the Corcoran building, opposite the U. S. Treasury.

An Oppressive Telegraph Monopoly.

Under the above title a pamphlet has been prepared and circulated in Boston and elsewhere by the organizers of the States' Union Telegraph Company. Below we give such extracts from the same as will be of most interest to the readers of THE OPERATOR.

At the present time, says the pamphlet, the Western Union Telegraph Co. virtually holds an entire monopoly of the telegraphic business of the country, and the prevalent idea is, that it is so strong and well entrenched that it would be almost impossible to establish successful competition. It is true that it has some valuable franchises, and through its contracts with the Associated Press secures the powerful aid of nearly the entire newspaper press of the country in extending and perpetuating its power, or, at least, can command silence to an extent which entirely prevents any open advocacy by the press of rival lines. This alliance with the press, formed through the cohesive power of mutual interest, its enormous capital, its connections with every town and city of the country, and the fact that it has absorbed every company entering the field against it, is well calculated to create an impression that it is invincible, and that any attempt at competition would be foolhardy and certain of disastrous defeat. But careful examination will convince any unprejudiced mind that the Western Union is so heavily handicapped as to be in no condition to wage successful war against a vigorous opponent, unnumbered by worthless trappings and watered stock.

Nominally, the capital of the Western Union is \$1,073,410, but its recent consolidation with the Atlantic & Pacific Telegraph Co., and the leased lines and property upon which it pays dividends, make an aggregate of over \$80,000,000, upon which it is now earning and paying quarterly dividends of from one and one-half to two per cent.; to do this the gross earnings must be \$10,000,000 per annum. What the exact amount of stock actually is, nobody save, possibly, the coterie of managers, knows, or is likely ever to know. No report of the corporation gives any statement covering this point, the policy of the managers being always to keep the public, including their own stockholders, in the dark about their property.

The Telegraph has grown to be so important an agent in the business transactions of the country, that its monopoly by a corporation so weighted as the Western Union is, with watered stock, worthless material, expensive contracts, and high-salaried officials, cannot, in the very nature of things, be long endured.

In addition to all the stock waterings we must not forget the loss of \$3,000,000 expended by the company in 1864 for the construction of the Russian extension line of telegraph, which was undertaken for the purpose of connecting the United States with the old world. The success of the Atlantic cable made this line useless, and it was finally abandoned as an entire failure, entailing a loss, as we have said, of more than \$3,000,000, which the public is now taxed to pay dividends upon.

That all efforts to establish and perpetuate competing lines have failed, is the best of evidence that the Western Union cannot stand competition, for it has been forced to buy them all; but it affords no proof whatever that a rival company, properly organized on an honest business basis, with lines properly built, for cash, and equipped with all the improvement which experience and inventive genius offer, would not prove a great success, and pay its stockholders handsome dividends.

A knowledge of the facts pertaining to the various telegraphic enterprises which have been entered into outside of the Western Union will plainly show the causes of their failure. Not one of them has been entered upon except with an inflated capital, and an evident intention on the part of their promoters to realize fortunes before a single message could be sent over the wires. They have all been speculative schemes, controlled by contractors and stock jobbers. The Franklin Telegraph Company, with but two wires from Boston to New York, was organized on a basis of \$500,000. The Insulated Lines Telegraph Company—its very name a delusion—was organized upon a basis of \$1,250,000, to build a four wire line from Boston to Washington, and the Atlantic and Pacific Company's original lines were built at the rate of \$1,666 per mile for a two-wire line from New York to Chicago.

Now, when it is understood that any of these lines could have been built for less than one-quarter the sums paid, one element of their weakness is made apparent. But there were others. These enterprises lacked comprehensiveness; they were frag-

mentary, the lines failing to reach many of the most important points in the country. Then, too, they were poorly constructed, and, of course, could not be operated with that promptness and reliability essential in securing the confidence, and thereby the patronage, of the public.

But notwithstanding these facts, it is an error to believe that these lines have ever been sold as the next-to-valueless property of bankrupt concerns. On the contrary, the Western Union has invariably paid good prices for them, generally much more than their duplicates would cost.

We maintain, therefore, that the sale of these lines to the Western Union, instead of proving the great strength of that concern, and the impossibility of successful competition in the telegraphic business, only proves its weakness, and that it has no chance of life except as a monopoly.

The recent purchase by the Western Union of a controlling interest in the Atlantic & Pacific Telegraph Company, cannot be regarded either as a cheap bargain for the monopoly or a losing one for the Atlantic & Pacific.

The Western Union certainly had no need whatever of the lines of the Atlantic & Pacific, but bought out the new company, as it had many others before, merely to get rid of an opponent.

Let us now see how the Western Union comes out of the contest. Before the purchase of the Atlantic & Pacific stock the Western Union had ample facilities for reaching nearly every important point in the country. It has practically purchased the property of the Atlantic & Pacific Company, represented by a capital of \$14,000,000, and will eventually withdraw two-thirds of it from use. But though the property of the Atlantic & Pacific will, after the completion of the arrangement for consolidating the two corporations, earn little or nothing, it will share in the profits of the Western Union.

Examination will show that this purchase of the Atlantic & Pacific is but a sample in the terms of many other purchases by the Western Union.

Having shown the water-logged condition of the Western Union, that its apparent strength is really fictitious, and that the failure of efforts at competition is entirely attributable to the fact that no one of them has been honestly based, originating either as speculative schemes, or through inherent weakness falling into the hands of speculators and stock-jobbers, we now propose to show that the field is open for establishing successful and permanent competition in the telegraphic business.

There can be no doubt that the present status of affairs affords a most excellent opportunity. There are no patents which give exclusive control of the facilities needed in the business. The Morse patents are dead. It is indeed true that some special telegraphic devices are controlled by the Western Union, but they are either not essential, or are fully equalled by other available inventions. Labor and material are cheap, and a new company would have the benefit of all past experience in the construction of lines and the means and methods of working them.

There are many important new inventions in telegraphic material and machinery, not controlled by the Western Union Company, which have been thoroughly and successfully tested by actual service, which would be made available by a new company. In the construction of new telegraphs much can be saved in cost, and much improvement can be made in the usefulness of the lines, by the use of these new inventions, and the improved material, giving them great advantages over the old ones.

A national law guarantees the right of way over any post route, and most of the trunk railway companies, dissatisfied with the arrangements of the Western Union, would gladly make easy terms with the new company. It can be conclusively proven that all the property of the Western Union desirable for the transaction of the entire telegraphic business of the country can be duplicated for less than \$10,000,000.

TELEGRAPHIC TARIFF IN FRANCE—A bill has been presented to the French Chambers to effect the reduction of the rate charged for messages throughout France to five centimes or one cent per word, with a minimum of fifty centimes or ten cents for any message. The present minimum is sixty centimes in Paris, and 140 centimes throughout France per twenty words. To provide for the probable increase of correspondence due to such a reduction of charge, a supplementary credit of 3,309,810 francs would be opened, 949,810 francs of which being destined for the personnel, and 2,369,000 for material and new works.

Telegraph Operators' Salaries.

From the Cedar Rapids, Iowa, Daily Republican.

The Western Union Telegraph Company is agitating another reduction of salaries of operators, under the pretense that salaries need equalizing. It is said that the poorest paid employes will receive a slight advance, and that the pay of the best employes will be reduced so far as to result in a little saving all around to the company.—*Davenport Democrat.*

That grand monopoly, that telegraphic corporation giant will wiggle and twist around, until some of these fine days off will come its head. We were not at all surprised to hear that there was to be a reduction of salaries, but were surprised to learn that they insinuate that the poorer paid operators will receive an increase. Depend upon it, the increase, if any, will be mighty small, while the "equalizing reduction" will be so made that the dividends will be much larger than they now are. There are no harder working and poorer paid men than the telegraphers of this country. The majority of them are mere slaves, at the will of some task master, who is ever ready to put on the pressure regardless of their needs, necessities, or ability, and who would not hesitate to render a man homeless to satisfy that dirty and corrupt part of his being which some call authority.

Out west, the railway operators are paid for doing both railway and commercial telegraph business. The telegraphic corporation own the wires, and the railway company keep them in repair for the use of them. Railway operators, by virtue of the fact that the majority of them are engaged in general station work, and are governed by officers direct, are better treated and better paid. But the commercial operators of this land are destined to be driven from their situations by young, uneducated, half-responsible boys and girls, who can be hired for little more than their board. If the Western Union Telegraph Company, the most extortionate charger in the world—in fact it makes charges that outdo the most historical of the Rebellion—could employ Chinese cheap labor, we believe it would do it. Their increase means reductions. Reduction means greater dividends. Greater dividends mean more money in the hands of eastern bloats who own the monopoly, and that in turn means finer turnouts, more richly furnished homes, grander suppers, more magnificent presents to their friends, finer jewelry, and a lot of sons and daughters, who are cradled in greater extravagance and luxury. All this comes from the very hardest days' works of the thousands of operators throughout the land.

Congress should introduce postal telegraphy, as in the old world, where men, when competent and trustworthy, receive good, fair salaries, and the surplus goes to the government. But until then, we would say to the boys, leave the telegraph business and go into something else, and in two years you will be much better off and not slaves.

Albany Wire Club.

The first regular session was held last week, at three o'clock. President Fancher in the chair. The meeting being declared open for business, George Smith moved that a message of greeting be sent to the N. Y. Wire Club. Fred Warriner asked if such a message could be sent D. H. The chair said that he had searched the Western Union general orders thoroughly, and found nothing to prohibit. Motion carried. Charley King moved that THE OPERATOR be made the official organ of this Club. (Applause.) Fred Evans said he should vigorously oppose this motion, as he thought every telegrapher in the land should stand by the paper which had so long stood by them—a paper which has ever been ready with words of consolation for the down-trodden knights of the key; a paper which in the face of the past two years transactions is bold enough to assert that the W. U. "never forgets its employes' manly and honorable conduct." Such a paper is the *Journal of the Telegraph*. (Silence.) Sammy Herschberger thought that any one having read Werner's article on consumption would, for sanitary reasons, be ready to oppose the bringing of the *Journal* into the Club; therefore he would second Mr. King's motion. Carried. A short essay

on "Tangent Galvanometer Tests," by George Smith, was then read, after which Charley Shelly favored the company with a baritone solo, accompanied by Johnnie Brayton on the jews-harp. At this stage of the proceedings Cashier Riley put in an appearance, attributing his late attendance to extra work on the "grade." The word grade seemed to cause a little uneasy movement of the assemblage. The chair read a communication from a prominent newsdealer, saying that another supply of the New York Herald, for March 18th, had been received and could now be obtained. This announcement caused a general stampede and a rush for the news-room, resulting in an impromptu adjournment of the meeting.

Chicago Notes.

Every number of THE OPERATOR is becoming more and more interesting to "the boys" here, and great concern is manifested by them, and likewise by the management, to learn in what direction the channel of criticism is flowing. Provision has been made for the sale of THE OPERATOR three doors below the office, on Washington Street, where non-subscribers can purchase single copies. This action was considered advisable on account of rumors that it was to be excluded from the office, and the fact that those of the subscribers who had their paper addressed to the office were unable to secure hydraulic pressure sufficient to force them up the pipe. At least they never reached the letter box. No insinuations!

As indications of spring come on apace, and lake navigation is likely to commence in a short time, frequent changes are made in the disposition of the force. The "split tricks" are almost entirely abolished until the snow comes again. Two men of several years' service here, two sub-chiefs, have gone out of the business, and we, one and all, heartily wish them success. Others are negotiating to the same end, so that "when the roses come again," we anticipate seeing many a loved and familiar face grace some other useful and more remunerative avocation.

O. W. Hamilton, brother of George A. Hamilton of New York, has resigned his position as sub-chief of the "overland" wires, and gone into other business. Jno. Stevely has been transferred from sub-chieftship of Milwaukee wires to the position vacated by Mr. Hamilton. Mr. Patton, of New York quad, created a sub-chief to fill the vacancy occasioned by the transfer of Mr. Stevely. Mr. M. McCollough has been transferred from day to night force. He worries the boys on Keokuk report. W. L. Cullen has been transferred from "split trick" to regular day force, Cincinnati quad and C. E. Cloud from "split trick" to extra day force, Milwaukee quad. John Strong has been transferred from day staff to St. Louis quad nights, vice C. B. Everham, now working Kansas City wire. Charley Haselton didn't paragraph and punctuate C. U. B. to suit the rhetoric of the management, consequently he retires from the second New York duplex to the Peoria quad, where C. U. B. never comes, and the weary operator has a little rest. W. C. Long, of the night staff, has changed off with Charley Day of the day force, the former working Buffalo duplex, and the latter second New York, in "Hazy's" place. Mind your stops, Charley, or you may "make yourself disliked" by the management. Jim Wright would like to change off with some night man, but he can't. It is only necessary to state that over nineteen hundred dollars worth of business was handled by the night force Tuesday night last, to show that they are the boys who do the work.

There are rumors rife among the boys of forming a "Chicago wire club." If the management initiate New York managers in everything, why should not the boys do likewise? XERXES.

Free Cable Landing.

The bill introduced in Congress, March 7th by Senator Howe, "relative to telegraphic communication between the United States and foreign countries," embodies a copy of the bill introduced by that Senator in the last Congress, authorizing the Secretary of State to grant permission to any and all parties to land cables on our coasts, subject to certain specified conditions, and contains the following new section:

"Any person on board of any ship or vessel registered in the United States, and sailing under the flag of the United States, who shall willfully injure or destroy any cable used for the transmission of telegraphic dispatches between foreign countries upon

the high seas, shall, upon conviction thereof in any district court of the United States, be subject to a fine not exceeding \$10,000, or to imprisonment for a term not exceeding five years, or both, at the discretion of the court, and the owners of such injured or destroyed cable shall have a right of action for damage against the person convicted of having willfully caused such injury or destruction."

The bill also provides, both as regards existing cables and telegraphic cable communication hereafter established, that the United States Government and the citizens of the United States shall enjoy equal privileges with the most favored foreign nationalities; that the lines of all such cables shall be kept open to the public for the daily transmission of commercial intelligence, and that all messages shall be forwarded in the order in which they are received, excepting Government business and dispatches in telegraphic service, which are to be given precedence in the order named. The bill was referred to the Committee on Foreign Relations.

Albany N. Y. Notes.

The friends and associates of Mr. Orville Coats, of the W. U., deeply sympathize with him in the loss of his little son, Freddie, aged two years and eleven months, who fell from a window to the pavement, a distance of twenty-five feet, receiving injuries which proved fatal. We were misinformed in regard to the resignation of Mr. W. B. Vansize, of the A. & P. It was simply a temporary arrangement to enable Mr. V. to look into a situation offered him in Canada, which he saw fit to decline, and has returned to his old position as chief in the A. & P. office. Mrs. John Nelson, who has had charge of the Broadway and North Ferry street office since its opening, has resigned to take charge of the St. Johnsville, N. Y., office. Mr. Richard Joyce succeeds Mrs. Nelson at "K." Manager Rugg has been experimenting considerably of late with the American Speaking Telephone. Some quite satisfactory results have been obtained, though we can hardly pronounce it superior to the Bell. The Bell Telephone is being used extensively throughout the city, and gives complete satisfaction, especially on the police circuits. Mr. C. H. Sewell, the agent, is an efficient worker, and has not only made the Bell Telephone a success in Albany, but also the American District Co. as well. The latter is very largely patronized by Albanians. F. Scott Smith, of Cooperstown, N. Y., is subbing in the W. U. A few Sundays since he had a chat with an old friend in Allyn, Mich., over a circuit of one thousand miles. Hogs mixed corn for high mixed corn is the latest. X Y Z

Plan for Local Telephonic Communication.

Mr. Isaac D. Smith, of this city, proposes to put wires and place telephones and magnetic call bells wherever wanted in the city, provided enough subscriptions can be obtained to insure the success of the enterprise, and will do all in his power to make the use of the telephone popular. He means to connect residences, offices, stores, markets, hack stables, the telegraph offices and police stations, with a central office, by means of a telephonic line, in such a manner that any one having such a connection may talk at any time with any other person having the same connection. Example: Suppose a person living on Washington Street wishes to talk with a friend on Asylum Hill; he signals the central office, and tells through the telephone with whom he wishes to speak. The operator at once calls the person on Asylum Hill and connects the wires by means of a switch in the central office, and they are for the time being both on the same wire. Mr. Smith will be able to connect one subscriber with another, with a grocery store, a market, a hack stable, a physician or policeman. Dinner at a hotel may be ordered, without leaving the house. Telephones and call bells will be put into subscribers' premises at Mr. Smith's expense, and a quarterly rental of only \$4.50 is proposed for the use of the same. Instead of the heavy wire and large glass and iron insulators generally used, Mr. Smith proposes to use a small brass wire about the size of a knitting-needle, and to fasten it on the house by the use of a small picture knob.—Hartford Courant.

When they get telephones in the hotels, it will refresh the weary traveler who is sent up to the fourth floor, to sit down quietly and impart to the clerk down in the office, his private opinion of that functionary's conduct.—Rome Sentinel.

A Model Office.

Columbus office is located at the corner of High and State streets, occupying three floors. The work done is very heavy, it being the principal repeating office for this section. Everything is new and shining. We have a nickel-plated spring Jack board to accommodate seventy wires, fifty-six lines, eight sets of repeaters, two duplex and 1500 cells of battery. Having heard so much about the tyranny of chiefs throughout our land, it will no doubt be a great relief to the boys (or machines), to know that there is at least one office where operators are recognized as gentlemen, allowed to think and have opinions of their own. The office is presided over by C. W. Ross, a gentleman who is particularly noticeable for his many amiable qualities, and who has a heart as large as an ox. The office is full of "old timers." It's a hobby of Charlie's to employ none but first-class men. Every man knows and does his duty, and is appreciated accordingly. The rules are strict but reasonable. Mr. Ross employs and discharges men without consulting anybody, all of which speaks for itself and shows that he enjoys the confidence of Supt. Williams, and when Mr. Williams singles out Columbus as a model office, he does not make a mistake. Duke Owings is Asst. Chief. Duke never had an enemy, and is the best looking man in the city. Frank Ross, night chief, is universally liked. Frank is a base ballist and an effective curve pitcher. The rest of the team are known as Geo. Irwin the great American pedestrian, Jim Golden the unrivalled horse and dog trainer, Tute Boyer, Henry Jones, boss lemon eater, Will O'Gara, Henry Vercoe the tenor, Jimmy Kimball, who was with Noah in the ark, Charlie Colewell a married man, Frank Conklin, the man with a chain, two check boys, three battery men and repairers.

The Whitworth Battery.

Mr. William G. Whitworth, sixteen years of age, of the Baltimore Western Union office, writes to say that he has constructed a new battery, which has proved a success. It is called the Whitworth battery, and the constructor tells us is composed of a piece of No. 18 copper wire twisted in the shape of a ring until it is large enough to cover the bottom of the glass jar. This wire is connected with a piece of rubber covered wire about a foot in length, running the length of the jar. The zinc is made of galvanized telegraph wire, twisted in the same manner as the copper wire. The zinc is then connected with a clamp, which in turn is connected with the forked prong that holds the zinc up in the jar. After putting the blue stone in the jar the battery is complete. All amateur telegraphers who cannot afford to pay for a regular battery, are invited to make one themselves in the above manner. The battery, it is added, works admirably on the locals.

Dashes Here and There.

Telephones are being sold at 75 cents each in Vienna.

Tramps would make good inspectors of telegraph poles throughout the country.

A new cable has been successfully laid between Santiago de Cuba and Jamaica.

Bergue says that the effect of the telephone is improved by placing one or more vibrating plates at about one millimetre in front of the ordinary telephone. The supplementary plates are perforated at the centre.

M. Chioffo, of St. Petersburg, by a series of experiments in the Russian War Office, confirms the results of the recent South Foreland trials of magneto electric machines, and recommends the electro-deposit of copper on the carbons.

The Germans call the telephone the "Doppelstimmige Sprachensprecher," which means "a double-voiced tongue-speaker." And a man would want such a tongue in his head to pronounce its Dutch name.—Nassau Herald.

The English Postmaster General said recently, in reply to a question in Parliament, that an inquiry had been made into the merits of the telephone, but the results were such as to render its use at present unsuitable for the postal telegraph service.

A patent has been granted for another telephone, this time to John Trovbridge, of Cambridge, Mass. Permanent magnets and coils are placed on opposite sides of the diaphragm, for the purpose of insuring the greatest freedom of vibration and movement.

One good mimic, who feels well, can break up an entire community [provided with telephones.—*New York Telegram*.

RESISTANCE OF HORN CARBON.—M. Salet has found that horn carbon gives far greater variations of electric resistance under pressure than graphite, and it is expected that it will therefore take the place of the latter in telephones constructed on Mr. Edison's principle.

THE KINSEGRAPH.—A writer in *Nature* says that by combining the telephone with the kinsegraph he can produce a talking picture which will move and gesticulate as a man does when he is earnestly engaged in speaking. Imagine twelve of these animate pictures stepping in to ask for that little bill.

W. A. Croft handed to the President some writing on tinfoil sent from Edison's new talking phonograph in New York. The workings, simplicity, and manner in which it reads the foil and re-delivers the message with clear articulation, were explained to him. The President expressed a desire to see the instrument of which such marvelous stories are told.

It is said that electrical wires wrapped around a common tin can form a cheap telephone, capable of transmitting musical sounds to similar cans through many miles of wire. This discovery facilitates the construction of a telephonic line along the Pacific Railroad, since a plentiful supply of discarded cans can be found by the roadside to form relays for the entire route. If the Indians only knew what a treasure was within their reach, they would immediately dance the can-can.—*Graphic*.

A writing telephone is suggested by the Abbe Labord. He proposes to separate the recipient and to fix one of the conducting wires to an iron plate and the other to a stylus slightly rounded at the extremity. Between the plate and the point which are intended to complete the circuit, a paper band properly prepared is caused to move when the telephone is in operation, and the black marks made upon the paper will denote what the sound at the transmitting end conveys.

It has been found in England that for short distances, it is not necessary to insulate a telephonic line. Articulation and the tones of a small musical box were heard over an uncovered copper wire circuit, laid four hundred and eighteen yards along the grass, the going and returning wire being kept well apart. Even when the wire was buried in wet clay for twenty yards, or immersed in the water of a pond for forty yards, talking in a low voice could be carried on without any appreciable loss of the effect obtained when insulated wires were employed.

Some gunnery trials by night were recently made at Metz by help of the electric light, and under the surveillance of a committee of German military officers. Strong lights placed at a considerable distance from the targets rendered them distinctly visible even during a thick fog, and enabled the gunnery practice to be carried on successfully. It was found possible to light up small detachments of men out of rifle shot so well that artillery fire could be directed upon them. It is believed that the electric light may be made very useful in siege operations.

Isn't this phonograph business going to kick up something of a rumpus in social circles? What's to prevent Mary Ann from having one of the little arrangements in her pocket, and taking down everything that George Augustus says to her? Then when she shakes him she can carry her little grindstone into court, and grind out everything he has ever said to her, whether he meant it or not. Some people are continually placing us in positions where the girls can get the best of us. Record us as voting "Aye" for busting it up.—*N. Y. Dispatch*.

The sudden unpopularity of the phonograph in Rome is all owing to Bubbins. He bought the first phonograph ever owned in this city, and it came by express Friday evening. He took it under his arm and stopped in at several places to discuss politics and things, and when he got home and attempted to exhibit the phonograph to his wife, that depraved instrument remarked in several different tones, "Set 'em up for the boys, barkeeper. Whoop, hooray! Yer's luck. Fill the blowing bowl. Who's afraid of the old woman." No more phonographs in Rome.—*Rome Sentinel*.

DEATH OF ONE OF THE FIRST PRACTICAL TELEGRAPHERS.—Frederick V. Beisel died at an early hour March 18th, at his residence in Philadelphia, in the 61st year of his age. He was one of the first practical telegraphers, having learned the bus-

iness in Harrisburg during the year 1847, and was connected with it, in one capacity or another, up to the time of his death. In company with General Stager and David Brooks he went to Pittsburgh while telegraphy was still in its infancy and was given a prominent position in the management of the Atlantic and Ohio Telegraph Company, which erected the first wire between that city and Philadelphia. He was manager of the Pittsburgh office until 1850, when J. D. Reid, the superintendent at that time, placed him in charge of the Philadelphia office. He remained in the employ of the company until the consolidation of the A. and O. Company with the American Telegraph Company, shortly after which he engaged in mercantile business in Philadelphia, but continued to take a lively interest in the extension and improvement of telegraphy. He was one of the first Directors of the Pacific and Atlantic Telegraph Company, and was also President of the Delaware River Telegraph Company. For the last fifteen years Mr. Beisel has been connected with the firm of Graeff, Roth-ermel & Co., of Philadelphia.

Echoes from 197.

Joe Wood has been transferred to Sacramento, Cal., and Ed. Kearny to Virginia City, Nevada.

There are four ladies working on the Eastern wires in the main office. They have superseded gents.

Increase for week ending March 19th, 1878, over corresponding week last year, 41,071 messages. No wonder we are graded.

The quips and quirkis and merry jests of the members of the Wire Club are stilled until they discover whether they are on the up or down grade.

A rose by any other name would smell as sweet. The automatic system which the W. U. Co. is about to adopt is the same old humbug, whether it be called electro-mechanical and metrical or automatic.

Mr. M. M. Dow, who has been working on the Cincinnati and Chicago circuit for several years past, has resigned and gone into the furniture business at Bridgeport, Conn. By his departure the profession loses a first-class telegrapher and a remarkably intelligent gentleman.

The Duxbury Cornet Band gave an entertainment (concert, minstrel show and dance) three nights recently. "Capt." Thomas played the B flat cornet and was afterwards middle man in the minstrel show. William Wood, another operator in "Di" danced a clog. The whole thing was a great success.

The next athletic meeting of the W. U. operators and clerks will take place on Wednesday, April 10th, at the West Side Park, Jersey City. Should the weather on that day be unfavorable it will be postponed until the following Saturday, 13th. Sports begin at 2.30 P. M. All are invited; entrance free. The grounds may be reached either by the Desbrosses or Cortlandt street ferries to Jersey City, thence by Montgomery Street cars to their terminus, from which it is but fifteen minutes ordinary walking to the park.

PERSONALS.

Jim Doody is at Salt Lake for the benefit of his health.

"Jeff" Hays leaves Virginia, Nev., to fill the vacancy caused by Geo. F. Brown's resignation at Salt Lake City, Utah.

S. N. Campbell, formerly of Sedalia, Mo., has been appointed Asst. Train Dispatcher for the C. & N. W. Railway at Clinton, Iowa, vice Tracy Barnes resigned.

The salaries of six men in the Salt Lake, Utah, office, who were receiving \$100 a month, and one who had \$95, have all been reduced to \$90, leaving every man at \$90.

Mr. J. M. Field, after being thrown out by the "contraction" of the A. & P., in the oil regions of Pennsylvania, is officiating "owl" at Huron, Ohio, on the L. S. & M. S. R'y.

The Mobile Register says that Mr. L. M. Merritt, a merchant in Pensacola, Fla., has obtained a judgment for \$4,000 against the Western Union Telegraph Company, as damages for non-delivery of a message.

Mr. Hendrickson having resigned the position of agent and operator at Hamburg, N. Y., Mr. A. Knap, of West Town, N. Y., has been appointed to the vacancy. Mr. John Stoll, night operator at Wortendyke, N. J., succeeds Mr. Knap.

Thomas R. Jones, assistant train dispatcher of the Central Pacific Railroad, at Sacramento, Cal., having resigned on account of ill health and under instructions from his physicians, H. B. Breckenfeld has been appointed to fill the vacancy. The appointment of the latter, who was formerly secretary of Superintendent Fillmore, has left that position vacant, and M. W. Wilder has been appointed to the position.

Among those who recently received the degree of M. D., at Kansas City, Mo., was Mr. M. M. Bond. During the progress of his studies the past two years he has worked from nine to eleven hours in the Western Union telegraph office in the same city, and is to be highly complimented upon the zeal he has displayed in achieving the high honor which has been conferred upon him.

Mr. W. G. Brownson, Master of Transportation, Cario & St. Louis R. R., acknowledging receipt of a handsome water service from the operators and others of the Eastern Division of the Erie Railroad, says: "It is particularly agreeable to find that the old adage, 'out of sight out of mind,' did not apply to this case. I assure you that you have not been forgotten by me, and that I shall always remember my connection with the employees of the Eastern Division and branches with pleasure."

EAST SAGINAW MICH., NOTES.—The W. U. office has been removed to the corner of Washington and Genesee streets, and now occupies the pleasantest location in the city. We think Messrs. Russell and Mana would look supremely happy were it not for "the grade" on which they have to labor. At the F. & P. M. R'y train dispatcher's office J. Green still holds the fort as chief, and also as agent for the telephone. W. H. Dunwoodie, the genial "Dun," is No. 2 at the office, but A No. 1 everywhere else. Close behind him "The Duke," Geo. H. Dupont, and Frank Leach. At the general office Miss Florence Grinnell is on hand. "Fix."

CANADA SOUTHERN RAILWAY ITEMS.—WESTERN DIVISION.—Iona is cared for by Mr. Reid: Dutton, by O. L. Soules; Bismark, by W. J. Waddell; Rodney, by C. A. Brown; Muirkirk, by H. F. Hindmarsh; Highgate, by George Hindmarsh; Ridgetown, by S. B. Floeter; Charing Cross, by W. G. Whitmore; Fletcher, by W. H. Stephenson; Comber, by Mr. McIntosh; Essex Centre, by J. G. Brodie; Amhurstburg, by Mr. Vahey. A ride over the river and we find Mr. W. L. Damon, Chief at Grosse Isle, and Mr. Hazelwood at freight office. Referring to our last Mr. Nelles at Waterford, says: He denies owning a pair of kids since the reduction of ten per cent on salaries. **SKIP.**

DEATHS.

CORBETT.—At St. Albans, Vt., of pneumonia, William M. Corbett, formerly an operator at St. Albans, but more recently of the A. & P., at Boston, aged 23 years and 8 months.

March 13, at Lyons, N. Y., of consumption, Miss Alice M. Goodell. Miss Goodell was well known to New York operators, who were represented at the funeral by Miss K. E. Donovan, of the A. and P. Co., Misses Emery and Hogan of the W. U., and Miss Ida Spencer of the Broker's Line. Buffalo operators were represented by Miss Brown. The flowers from Buffalo and New York were emblematic of the harmony of Miss Goodell's actions and the purity of her life. Mrs. Stults, the kind friend who nursed her through many months, writes in acknowledgement, that "no sweeter or better tribute of love could have been paid to Allie than the harp of flowers, and could she have spoken, she would have said, 'although my fingers cannot now play upon its strings, I will carry it in my heart to my home above, where the gentle air of Heaven will bring from it to those who sent it, a song of my never dying love.'"

BIRTHS.

Saturday, March 16, to Mr. E. L. Parmelee, of St. Louis office, a boy—11 pounder.

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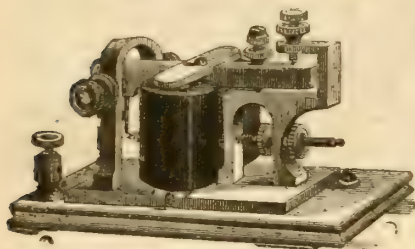
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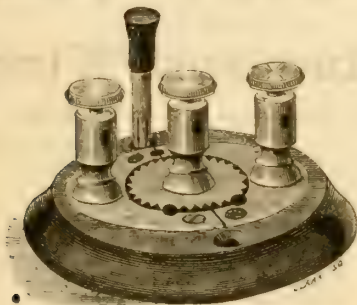
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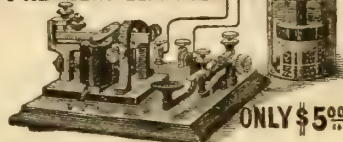
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THE OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

April 15th, 1878.

Volume IX.

Whole No. 100.

The Telephone.

The world stood still for a thousand years,
And crept for a thousand more,
This wonderful world with wings for ears,
Like the Messenger god of yore—
And winged feet and winged wand,
And a wing on its either hand,
And more than Mercury wore.

It bridges and rides a furnace's foal
With iron and hammer for sire,
Great clouds of white from their nostrils roll,
And it feeds its horses fire!
They are blooded stock, the engines swift,
Beneath their heels the distances drift
Like snows from the Arctic Pole!

They rattle across the meridian lines,
And down the parallels play;
They marry together the palms and pines,
A thousand miles in a day.
The world has trained a wonderful wire,
A nerve of a route for articulate fire,
And taught the lightnings to say:

"Dear Mary, be mine!"—"Car-load of swine!"—
"One ton of cheese!"—"Maria dead!"—
"Joy! it's a boy!"—"I'm coming to dine!"—
"Send soap!"—"She's married to Fred!"—
The humblest of words like angels fly
A thousand miles in the flash of an eye.
You hear before they are said!

What happened at 10 you know at 9,
And you away in the West,
They distance along the lightning line
The sun in his golden rest,
They talk to-day in audible tone,
The telegraph turns the telephone,
And parted lovers are blest!

Think of a girl in a lonely hour,
No beau in forty miles,
She sits by the tube of talking power,
She thinks a minute, and smiles.
"I'll call my John," you fancy her say,
"He lives but a hundred miles away,
And banish the weary wiles."

Behold them at the ends of the line,
This John and his black-eyed bon;
His head and her's to the wire incline,
And she sings him Bonny Doon.
He sighs for the only thing amiss,
He has no voice, but then he can—kiss!
He might as well be in the moon!
For emptier than an east wind's laugh
Is a lover's kiss by telegraph!

—Benj. F. Taylor in Syracuse Journal.

A Parting Salute from "Argus"—In Transitu.

"To feel the peace of self contentment's lot,
To own all sympathies, and outrage none,
And in the inmost powers of sense and thought,
Until life's sunny day is quite gone down,
To sit and smile with joy, or, not alone,
To kiss sad tears from the worn cheek of woe,
To live, as if to love and live were one,
This is not faith or law, nor those who bow
To thrones on heaven or earth, such destiny may know."

In transit, the sights that have greeted my eyes above and below, can scarce be hinted now. But yestern'en, wandering, I beheld Esau, who saw the error of his ways too late! too late!! too late!!! "Pottage" was his curse, and he had made a mess of it. Above us was the sky, beneath the sea, beyond the earth, and mites of immortality struggling in the bewilderments of the day, little seeing tomorrow's store. He and I saw Chicago and the commotions there. By the way, it is sad to know that so many operators are illy prepared for "rainy days"—the days of gradings, sliding scales, and other adversities. While a few have been provident, and can afford to feel a sort of independence, a goodly number, among them some of the most capable and talented, have, by force of circumstances, damaging entertainments, or prodigal wast-

ings of time, become helplessly bankrupt, or hopelessly in debt. Lax principles rule the lives of some who never miss a meal, and seldom pay an honest cent. Our sympathy is rather extended to those whose natures under a purer management might not have been perverted to base uses, but have enjoyed a proud and honored manhood. Their downfalls and drawbacks may be traced to the hands of those who should be given to better things. I refer to the long continued practice of money lending carried on by men connected with the management of Chicago office, men holding positions of trust and responsibility, and in comparison with whom pawnbrokers are a godly set. Pay days occur there on the 1st, 10th, and 20th of each month. An arrangement with the convenience of which, it would seem, all should be satisfied. Yet there are men there daily holding and handling the company's money, who, between those days grow rich by furnishing any operators (tolerably secure in their positions) with any amounts covering their monthly time, and reaping on each salary a monthly interest of from five to ten or twenty five dollars. The demoralizing influences upon operators and their services by such dealings, need be but briefly commented upon. The condemnation of those engaged in the avaricious extortions cannot be too abrupt and decided, and should be hastened by those a part of whose duties should be to preserve so far as possible, the integrity and respectability of the profession.

A glance as an illustration: One of their victims (youthfully imprudent) on the 5th, or any day of the month, wants a little money for immediate use, and secure from attachments. 'Tis easily obtained. He writes his due bill for twelve dollars, (due the 10th) and walks out with ten. Ten dollars, he says, will in no way satisfy the voracity of his increasing army of creditors, therefore he will supply a few needs, and be as merry as he can. The morning finds him often penniless. Pay day arrives, when, probably, enough his hardly due him to settle his bill at the lunch counter, and afford him a five cent ride to his lodgings. His boarding house, tailor, laundry, etc., where are they, and what can they do?

The young man thus lives on from month to month and year to year, each day adding to his obligations, and injury to his name. Finally the soul-withering work is done. Grim or pleading visages of creditors cease to terrorize. Anxious timidity is replaced by a bold, unblushing, defiant front. His good reputation gone, and his existence a blot. His case is one in many. There is in Chicago office an unusually intelligent, genial, and promising young man, and even now one of the very best operators in America. Some time ago he fell into the money lender's trap for the unwary, and being of a convivial disposition, was soon in thrall, and for some shortcoming was, about six months ago, discharged. After wandering about awhile he was taken back by Manager Maynard, at a salary of fifty dollars a month, and has since been paying to official sharks interest and principal of money long borrowed, and at a rate covering a greater part of his earnings. His necessities have thus frequently compelled him to go bedless and hungry. He is taunted by the past, and sees no hope in the future. Robbery in the way of perquisites, and errors (?) in figures may be explained away, but it seems difficult to divine why the outrages above mentioned have been so long tolerated or permitted. An abatement and a new order of affairs are most earnestly prayed for. Salaries are being reduced with a vengeance. The district superintendent seems anticipating a wish he has often expressed within the last year or two, "that every operator in the office would resign, as he could fill all their places, at forty or fifty dollars a month." Of course! He could just now, if he would, starve many of them out of house and home. Did his expressions represent the spirit and intent of those more potent in authority, they might be regarded as ominous of a doomsday not far away. We prefer to weigh his words as the result of a little eccentric playfulness of mind. He might with equal truth have declared that, by stress of hard times, there are at hand many men of education, intelligence, and refinement, who would fill his own position well, and at half the salary he unhesitatingly receives, yet there is no likelihood of his feeling considerate enough to resign. There is a rumor that a manager or two and a squad of chiefs have commendably agreed to vacate their posts, or engage in meritorious employment simply with the idea of facilitating the grading and reduction—such rumors must be accepted, however, with liberal allowances.

A word to all operators: These reductions and signs of the times should be studied as the most profitable lessons of your careers. Forego every luxury with an uncompromising will. Live frugally and cleanly to the nicest degree. Your power in courting liberty, honor, and happiness lies alone in earnest individual efforts. The man who does not immediately join in plans of economy and accumulation, must, in future distress, blame most himself. Life cannot be made too easy for those who, by age, exhausted talents, or illness, are unable to work, strive for the truest wisdom, and the surest refuge, and all may be well.

Subscribe at once for THE OPERATOR. Not to make war upon the Company, but industriously to encourage and promote every interest wherein the Company and the employees are mutually dependent, seeking to purify all bad and corroding elements, whether in official or subordinate places—leading all to conduct themselves so that the publishing of the truth will cease to terrify.

THE OPERATOR should be maintained upon a firm basis, and enlarged to a capacity allowing all from Nova Scotia to the Gulf, and from ocean to ocean, the frequent, constant, and impartial interchange of ideas, proposals, projects of investments, or any matter tending to the promotion of moral, intellectual and thrifty habits.

We have heard from enough of the artists and scribes to confirm us in the belief that there is "slumbering genius" in the rank and file, once awakened, sufficient to secure to the telegraphers of America characters, minds, and names honored, grand, and ennobling. There has been holding them in the past too much of dream-like indolence—a semi-conscious security, deceiving and cancerous. If you don't begin somewhere to hunt a way out of the labyrinth, you might as well set yourselves down as unworthy a better or loftier standing in the world than that most of you are sometimes loath yet half obliged to acknowledge. What do Messrs. "Oakum," "Werner," the Editor, and others think upon the subject? Wake up, boys! Fall in line, and let the band begin to play.

For a time, farewell.
Moon, March, 1878.

ARGUS.

How the Mysteries of a Nutshell Can be Unraveled.

An important question for the telegraphers of this country—the question of compensation—is now under process of solution. Up to the present moment, however, they have had no voice in the matter, and have not even been consulted. This being rather a high-handed sort of proceeding, and no other mode of redress being open, an imaginary interview with one of the directors of the Western Union Telegraph Company was sought for the purpose of having an "understanding." If the details of the interview, as given, are not strictly accurate as regards expression, the sentiments at least may be accepted as *bona fide*. There are various precedents bearing on this point which I might cite to advantage, but, with one exception, I will forbear. All who have read Farjeon's "Blade-O-Grass," will remember with what satisfaction little Jimmy Virtue, who kept the leaving shop in Stoney Alley, played with and defeated his imaginary partner at seven up. The same feeling of exultation which thrilled the being of Jimmy on these occasions, to a certain extent pervades my own as I chronicle the main points of the interview aforesaid.

After mustering up the requisite courage, I entered the private office of the gentleman who so successfully managed the "grading" scheme, and informed him that I had been deputed by my colleagues to ascertain whether some arrangement could not be effected between the company and its thousands of employees, who, believing that they had some rights, desired to know what they might expect in the future.

Rich Director: "Ah, my dear fellow, glad to see you; those friends of yours are raising quite a rumpus in the columns of THE OPERATOR. We have no objection to talk with you, as talk is cheap, but as for an 'arrangement,' why that's quite impossible, you know."

Poor Operator: "Then you do not acknowledge that the operators have any claims on the company?"

Rich Director: "What claims can they possibly have that are not met? Don't we pay them for what they do?"

Poor Operator: "But they claim, and with some justice, it strikes me, that this company, big as it is, has been built up by their efforts, and that it is

Simon pure robbery to cut down their already meagre salaries, especially after promising to remember them when prosperity came. The last quarterly report shows a large balance in favor of the company, and that there was consequently no necessity for this last reduction."

Rich Director: "Well, well, I do declare! I always thought there was a screw loose somewhere. The trouble is, that you boys know nothing about business. That's it, that's it (rubbing his hands gleefully). We are an independent corporation, you must remember, and have the right to deal with our men as we choose. If they don't like our terms, they are at liberty to go elsewhere. We cannot acknowledge claims that do not exist, you know; the very idea is absurd."

Poor Operator: "Then faithful service counts for nothing?"

Rich Director: "Exactly so."

Poor Operator: "And the adoption of the term 'grading' was, then, merely a cunning device to make the blow fall easier?"

Rich Director: "You are quite correct, my dear fellow, remarkably correct, and I think you ought to thank us for having that much consideration for you. The plain truth is that the salaries must be equalized."

Poor Operator: "What do you call the equalizing point, then?"

Rich Director: "Oh, fifty dollars a month, I should say."

Poor Operator: "But do you not think such conduct on the part of a corporation toward its employes is likely to produce revolution? The riots of last summer may be mentioned as examples."

Rich Director: (in an undertone) "Bless me if I don't believe he's a Communist. (Aloud.) You overlook the fact that the law will protect us; and if you have come here to threaten us I shall hand you over to the police."

Poor Operator: "That would do no good, sir; this is a free country, which you seem to forget."

Rich Director: "How so?"

Poor Operator: "Look at the galling treatment operators must submit to in the New York, Chicago, and other large offices—throughout the country. Slavery is a mild name for it."

Rich Director: "We must have discipline, and our managers are justified in maintaining it at any cost."

Poor Operator: "Even at the expense of liberty?"

Rich Director: "Quite so, quite so. But come, now, you are a shrewd sort of chap, and perhaps we can come to an understanding between us. What do you say?"

Poor Operator: "Please make your statement."

Rich Director: "Well, suppose you patch it up somehow with your ah—friends, and I'll fix up a nice place for you, eh?"

At this stage of the interview my indignation was so great that it must either have blown me clean through the ceilings, or the side of the building. I cannot undertake to say positively which, but when I next came to my senses I was sitting in my cold and cheerless room, thinking what a hollow mockery this world is after all. STATIC.

The Aerophone.

Something ought to be done to Mr. Edison, and there is a growing conviction that it had better be done with a hemp rope. Mr. Edison has invented too many things, and almost without exception they are things of the most deleterious character. He has been addicted to electricity for many years, and it is not very long ago that he became notorious for having discovered a new force, though he has since kept it carefully concealed, either upon his person or elsewhere. Recently he invented the phonograph, a machine that catches the lightest whisper of conversation and stores it up, so that at any future time it can be brought out, to the confusion of the original speaker. This machine will eventually destroy all confidence between man and man, and render more dangerous than ever woman's want of confidence in woman. No man can feel sure that wherever he may be there is not a concealed phonograph remorselessly gathering up his remarks and ready to reproduce them at some future date. Who will be willing, even in the bosom of his family, to express any but the most innoxious and colorless views? and what woman when calling on a female friend, and waiting for the latter to make her appearance in the drawing-room, will dare to express her opinion of the wretched taste displayed in the furniture, or the

hideous appearance of the family photographs? No young man will venture to carry on a private conversation with a young lady, lest he should be filling a secret phonograph with evidence that, in a breach of promise suit, would secure an immediate verdict against him, and our very small-boys will fear to express themselves with childish freedom, lest the phonograph should report them as having lightly used the name of "gosh," or as having threatened to "bust the snoot" of the long suffering governess. The phonograph was, at the time of its invention, the most terrible example of depraved ingenuity which the world had seen; but Mr. Edison has since reached a still more conspicuous peak of scientific infamy by inventing the aerophone—an instrument far more devastating in its effects, and fraught with the destruction of human society.

The aerophone is apparently a modification of the phonograph. In fact, it is a phonograph which converts whispers into roars. If, for example, you mention, within hearing of the aerophone, that you regard Mr. Hayes as the greatest and best man that America has yet produced, that atrocious instrument may overwhelm you with shame by repeating your remark in a tone that can be heard no less than four miles. Mr. Edison, with characteristic effrontery, represents this as a useful and beneficent invention. He says that an aerophone can be attached to a locomotive, and that with its aid the engineer can request persons to "look out for the locomotive" who are nearing a railway crossing four miles distant from the train. He also boasts that he will attach an aerophone to the gigantic statue of "Liberty" which France is to present to this country, provided we will raise money enough to pay for it, and that the statue will thus be able to welcome incoming vessels in the Lower Bay, and to warn them not to come up to the city in case Mr. Stanley Matthews is delivering an oration on the currency, or Mr. Cox is making a comic speech at Tammany Hall. Were the aerophone to be confined strictly to these uses, it might prove a comparatively unobjectionable instrument; but no man can loose a whirlwind and guarantee that its ravages shall be confined to Chicago, or to some other place where it may do positive good.

This country has long suffered from excessive talk. Had nine-tenths of our citizens who have been born during the last fifty years been absolutely dumb, the Republic would doubtless have preserved its pristine purity. It is the interminable talk of Congressmen and other leading citizens that is the source of all our public woes. Talk is likewise the bane of private life. With dumb wives there would be no need of divorce courts, and with dumb husbands home might become a blessed reality instead of a poetic dream. And yet, knowing full well that talk is a monster of such hideous meaning that to be hated needs only to be constantly heard, Mr. Edison has devised an instrument by which the range of conversation is extended from a few feet to four miles.

Our present vocal powers are always used to their full capacity. Everybody talks with about the same volume of voice, and when the aerophone comes into use, people will universally talk as loudly as the instrument will permit. When ninety-nine people out of a hundred converse with the aerophone, there will be such a roar of conversation that the hundredth person, who may speak in his natural voice, cannot be heard. We can only faintly imagine the horrible results of the general introduction of the aerophone. Wives residing in suburban villages will call to their husbands at their places of business in the city, and require information as to subjects of purely domestic interest. Mothers whose children have wandered out of sight will howl over a four-mile tract of country direful threats as to the flaying alive which awaits James Henry and Ann Eliza unless they instantly come home. From morning till midnight our ears will be tortured with the uproar of aerophonic talk, and deaf men will be looked upon as the favored few to whom nature has made life tolerable.

The result will be the complete disorganization of society. Men and women will flee from civilization and seek in the silence of the forest relief from the roar of countless aerophones. Business, marriage, and all social amusements will be thrown aside, except by totally deaf men, and America will retrograde to the Stone Age with frightful rapidity. Better is a dinner of raw turnips in a damp cave than a banquet at Delmonico's within hearing of ten thousand aerophones. Far better is it to starve in solitude than to possess all the luxuries of civilization at the price of hearing every remark that is made within a radius of four miles. It may be too

late to suppress the aerophone now, but at least there is time to visit upon the head of the inventor the just indignation of his fellow-countrymen.—*N. Y. Times.*

Telegraphers' Paralysis and the Phillips Alphabet.

I am not in favor of Mr. Phillips' new alphabet, for at this time when we are trying our best to discourage students from learning the business, and also fighting telegraph colleges, through the aid of your valuable paper, so successfully, we would, by adopting Mr. Phillips' plan, be lowering ourselves to the level of these undesirable connections. Still, if there is no other remedy for the evil, and Mr. Phillips' alphabet will cure or alleviate it, then let us accept our destiny; but I think it should be the last extremity resorted to. ICICLE.
BOSTON, MASS.

Mr. Phillips' alphabet, outside of lessening the liability to error, has little to recommend it. This non-paralytic alphabet, as suggested, is not entirely in accordance with my experience. To my mind, the most objectionable letters, those requiring the greatest amount of nerve force, are the ones in which the dashes are preceded by dots. It seems to require extra exertion to make a dash after a dot, and *vice versa* when the dots follow a dash. For instance, let a person call av; then reverse them, and call nb, the relief is at once perceptible. OLD STYLE.

PERTH AMBOY, N. J.

I repeat my assertion that operators' paralysis cannot be cured in the way that Mr. Phillips suggests, and that the only cure is less work and more relaxation. To show the fallacy of Mr. Phillips' arguments, I will cite one or two cases which I think will prove that the trouble does not originate with the Morse alphabet. The utter absurdity of Mr. Phillips' proposition being so apparent, prevented my doing so before. The first case is that of an operator who works the motor, and who scarcely knows how to make a Morse character. In the name of common sense can the Morse alphabet have had anything to do with his paralysis. The second is that of the manager of one of our largest branch offices, whose onerous duties prevented his handling over twenty messages a day. Surely the Morse alphabet is not the innocent cause of his arm hanging almost useless by his side. In the case of the latter, his physician, who has successfully treated other cases of a paralytic nature, tells him that rest and relaxation are the only remedies. Before changing the present system we should consider the consequences which would follow. It is a well known fact that the Continental or any other alphabet which does not contain spaces can be mastered easily in from three to six months—one year being quite sufficient to make an "expert." On the other hand it is admitted on all sides that it requires at least three years steady practice to make a fair operator with the Morse alphabet, and Mr. Phillips himself admits that it took his "friend" eight years to become an expert. It does not require an individual of acute observation or of very great discernment to foresee what the result will be. If the alphabet is changed I venture to predict that in one single year there will be thrice the number of operators there are at present, and with such an increased supply of labor, salaries will inevitably be reduced again to a much greater extent than heretofore. BLUES-TONE.
PHILADELPHIA, Pa., April 2d.

I believe with Mr. Phillips that the spaced letters are at the root of telegraphers' paralysis. In the formation of these spaced letters there is required an absolute control of the muscles of the hand and arm, a delicacy of touch, and a correct conception of interval and duration of time not attainable by one man in a hundred; hence, the legions of faulty senders at large to-day. It is a mistake to imagine that the combined duties which many operators are required to perform contributes in a marked degree to this condition of things.

I know of men with hands as hard as barndoor, and whose time is chiefly occupied in performing the most arduous and laborious tasks in and about railroad stations, who are as finished and perfect transmitters as ever touched a key. I know of others who do nothing but send and receive from early morn 'till dewy eve, who never can and never will become perfect or even passable manipulators. The fact is, that the spaced and dotted letters could not be satisfactorily formed by one-tenth part of the

human family to-day, were they all miraculously endowed with a knowledge of telegraphy.

The suggestion of "Bluestone" that the only remedy lies in total relaxation, is, I am constrained to think, hardly admissible. It is like saying to a drowning man, "the only way to be saved is to get out," whereas a plank thrown him might prove an acceptable relief, and be the ultimate means of saving his life. Total relaxation is an undoubted cure, but as, to men who must labor for their daily bread, that is an impossibility, it is surely worth while to consider kindly some other means of relieving the sufferings of those who have been already attacked, and of staying the further depredations of the insidious malady. Personally, I have never experienced the slightest difficulty with the Morse alphabet. It is a music all divine in my ears, but as it is possessed of a fatality subtle, unerring, and destroying to the great body of operators, I vote for its dethronement from the place it holds in every old operator's heart, and the substitution of the Phillips' code in its stead. C. H. DAVIS.

WHITNEY'S POINT, N. Y.

Mr. Preece on American Telegraphy.

Mr. W. H. Preece delivered an interesting lecture in London, February 18th, on American telegraphy, in which he said:

In the United States and Canada there are, altogether, some 300,000 miles of wire. The Western Union Company have about 195,000; the Atlantic and Pacific, 30,000; The Montreal, 20,000; the Dominion, 7,000; smaller companies and railways, 40,000. There are some 11,660 offices, and, during the last year, 28½ millions of messages were carried.

Embarked in this enormous enterprise is a sum of 60 million dollars of capital; the amount of capital lost it would be difficult to estimate. Some idea of the number of ventures which have been started from time to time and absorbed may be gathered from the fact that the Western Union Company alone comprises over 200 smaller ones.

Local companies are numerous, such as the Gold and Stock Co. of New York, the Law Telegraph Company, which enables lawyers to hold consultations with each other and with their clients without leaving their offices, district companies, etc. Then there are the railway companies' telegraphs, and about 2,500 miles of military telegraphs, which render good service in reporting meteorological changes, and in foretelling storms.

In England, pre-payment of messages is compulsory; but in America they have "collect" messages, the payment for which is collected on delivery. This is one of the bad results of great competition. There is another feature wherein their practice differs from ours, viz., "deferred" messages, which are messages handed in one evening for delivery next morning. This is a valuable privilege to the public in places a long way apart, and separated by two or three days' post. The result is that between New Orleans and New York 42 per cent. of the traffic is done in "deferred" messages, while at Baltimore the proportion is only six per cent. Of the total Western Union traffic, 13 per cent. is "deferred."

Comparison between the two countries is difficult; but, practically, telegraphy is cheaper in England than in the States, the ratio being as 1s. to 1s. 10½d. On the other hand, the average distance in America is seven or eight times the English. Press arrangements are not superior to ours. News is collected by a Press Association, and carried by telegraph companies at low rates, viz., 1 cent to 10 cents per word, the lowest being 1 cent per word for 500 miles. Additional copies are supplied to newspapers at half-rates. The average rate for a message from the Associated Press to a newspaper in any part of the States is \$1 for 100 words, extra copy fifty cents. In England these are twenty-five cents and fifty cents respectively; and consequently we do more press work than they do in America. In England, on an average, 700,000 words are transmitted nightly, and two millions of words are delivered to newspapers every morning, being about ten times as much as in the United States.

American companies are obliged to carry Government messages at 1 cent per word per 500 miles; and a large business is done in this direction, as also in free messages, which form a large percentage of American traffic.

The telegraph service is quite a favorite one in America, and it is quite the exception there to meet a person who knows nothing about telegraphy. At Harvard, the undergraduates have their services of telegraphs, and form themselves into companies, it

being quite an honor to belong to the leading companies. Telegraphy being used to a large extent on railways, the railway servants are mostly accustomed to it, and there are few station-masters who have not at some time or other been operators.

There is a large demand for operators in the various companies, and consequently a plentiful supply. The pay is good, the average salary of an operator in the Western Union Company being £192, while in England it is only £80. Great pride is taken in the work, and many of the operators become very skillful. Mr. Preece does not consider the scientific attainments of the staff equal to that of the English staff, a fact which he attributes to the absence of submarine cables.

Females are employed by the American companies, though not to so large an extent as in England.

Mr. Preece thinks that the alphabet in use is probably slightly quicker than the Continental, but considers that it leads to more errors.

With regard to engineering details, the American lines are chiefly characterized by extreme simplicity and uniformity in the stores used, and in the manner of performing the work. In the early days of telegraphs the railways were seized by the first companies, later comers being driven to the roads; both are now plentifully covered with lines. The average cost of a one wire line is from 100 to 150 dollars per mile, not much more than in England. Very little underground work is used, but on the other hand street work is far too commonly resorted to. Mr. Preece was strong in his denunciation of the unsightly lines of wires which, even more than in England, disfigure the best streets of large towns. No throughfare, however beautiful, is free from invasion by telegraph companies; in some places two or three rival lines exist side by side in the same street. For some of these town lines of poles of enormous height are used. In New York and Philadelphia there are poles 90 to 96 feet high, and in Chicago 75 feet. These gigantic poles are, of course, erected at great cost.

Salary Grading Dissatisfaction in the West.

"A bad break" is threatened in the unseen current that flows so tranquilly across the continent through the wires of the Western Union Telegraph Company. Already the murmurings of the impending disturbance admonish the heads of the great monopoly that trouble is ahead. In short, the operators are dissatisfied, it is said, and are about to rebel against the reduction that went into effect April 1 under the title of "gradation." No class of men are more clannish or can more easily make trouble to their employers than operators, as they can talk to one another and keep posted on each other's plans from one end of the land to the other, and the managers be oblivious of what is being done. Some time ago the Executive Committee, realizing the difficulty of paying a satisfactory dividend upon it, is said, \$80,000,000 of stock, and keep such an army of high priced-officers in their places, decided upon a reduction under the name of "gradation." Circulars were sent out to the division superintendents, directing them to run the offices as cheaply as possible, and if the views of the committee met with favor their authority would be increased. A meeting of the division superintendents was called in Chicago, and the result has been a "gradation." A sop was thrown to the operators by telling them that what was taken off the salary of high-priced men would be given to those receiving small salaries. The upshot of the matter has been that the salaries were so cut as to leave only two first-class men in the office here, as an employee informed a reporter of this paper yesterday. Now there is trouble every night. A man is needed for a first-class wire, but there is no man receiving a first-class salary to put at the key. A man is ordered to the wire, and objects. He draws only second-class pay, but is told that he can see the manager about it the next day. He works and sees the manager, with no good results, and the next night the same thing is gone through with, with another man. The gradation here has resulted in a saving to the Chicago office of \$475 a month, and of \$500 a month in New York if the plan is carried out. At the New York office such a violent objection was made that the matter was not pushed, and is still pending. The course adopted in this, the central division, has been to reduce and not "grade." In Milwaukee the cut has been \$10. St. Louis, \$5; Omaha, \$10; Salt Lake, \$10; Cheyenne \$10 all around and not a single case of a "raise." At Louisville the reduction has been \$5

all around and no raise. A protest is to be sent from the operators to the Executive Committee in New York, and if it is unfavorably received, the gentleman from whom the above information was gained stated that the consequences might be serious.—*Chicago Inter-Ocean, April 5th.*

The Optograph.

The latest electrical wonder is an invention by one of the Baltimore Western Union operators, called the optograph. If this ingenious contrivance could only be made to do all that its inventor claims for it, it would indeed revolutionize telegraphy, and make the telephone, the phonograph, and all the other graphs hang their heads in shame. It seems that one of the young lady operators in the Baltimore office, a bright, quick-witted damsel, a fine musician and proficient telegrapher, and the possessor, moreover, of a fair share of feminine curiosity, one day noticed one of their male colleagues gazing intently at a small mirror on the table in front of him. She inquired what he was doing. "Oh," he replied carelessly, "I am testing my new invention, the 'optograph'; I am watching an operator in the Washington office." "Nonsense!" exclaimed the young lady. "No nonsense about it," rejoined the other operator, "wait till tomorrow and I'll give you a sample of its powers," and gathering up his mirror and disconnecting two or three small wires, the operator retired. Next day, during a lull in business, the young lady referred to the optograph, and demanded that its workings be shown her. "All right," said the inventor, "call Washington, ask him to throw into circuit his optograph wire, and you'll hear something that will astonish you." The young lady called Washington, and asked the operator who she was, what she was doing, etc., and to her utter amazement he answered all her questions correctly. Finally he said: "you have but one message on your table; a red." "Can you read it?" asked the fair electrician. "When I put on a more powerful glass," said the Washington operator, and then he deliberately wrote out the message word for word. "Well," ejaculated the astonished young lady, "it is wonderful; I can't make it out," and she subsided into a reverie from which she had not emerged when her relief arrived in the afternoon. Three or four of the fair operator's ungallant co-workers were in the secret, and are not yet done laughing over the bright young lady's discomfiture. The secret was that in the next room was an operator who had a copy of the message which was lying on the lady's table, and who had watched her every motion, communicating all to the operator in Washington with whom she was talking. It is supposed that the young lady is fixing up a "sell" for her persecutors, and when she perfects it they will certainly catch it.

An Improvement on the Edison Telephone.

Mr. Edison has made an improvement on his carbon telephone. In the two previous inventions the diaphragm was suspended from the carbon disk by a small section of rubber tubing. He has discovered that by bringing the diaphragm into immediate contact with the disk, a considerable increase in the force of articulation is secured, and that the thickness of the diaphragm could be increased at least three times without affecting it. By this method vibration gives place to pressure. Experiments were recently made with this improvement between the offices of the Philadelphia Local Telegraph and the residence of Mr. Edison, at Menlo Park, N. J. a distance of sixty-five miles. The remarks made through the instrument at the Philadelphia end were even more distinctly heard at the other. An experiment was made of sending remarks to Menlo, via New York, a distance of 135 miles, which was equally successful.

The second invention is the airophone. It is an instrument into which words can be articulated, and they gather such force as to be heard for a number of miles with great distinctness. Indeed, it is in reality a talking fog horn. By its aid captains of vessels meeting at sea could converse easily while three or four miles apart; signal station officers could warn vessels coming on a dangerous coast to keep off; and it is adapted to all uses to which such instruments as fog-horns, etc., are now applied. This is a most remarkable discovery. Mr. Adam's, Edison's agent, has left New York for London. A company of English merchants have offered Mr. Edison £60,000 if the invention can successfully be applied to the local telegraph wires in London.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

April 15th, 1878.

WESTERN UNION stock is selling at 82½, A. & P. at 21.

We give to-day, and shall continue from time to time, a column of Answers to Correspondents on electrical subjects from the *Scientific American*, which we believe our readers will find interesting and instructive.

THEY had a very severe snow storm along the line of the Dakota Division of the Northern Pacific R. R., April 10th. The cuts were drifted full of snow, trains delayed half a day, and wires prostrated in all directions.

A LOCAL electrical journal, called the *Magnet*, has made its appearance in Cincinnati. It is a little smaller than our outside sheet, and is executed with the electric pen. We hope its publishers will speedily become millionaires.

A WREATH of laurel is reserved for the brow of the man who can inform the Executive Committee of the Western Union Telegraph Company how another reduction of operators' salaries can be effected which will "ultimately be for the best interests of the employes."

It is thought that after awhile the Western Union, instead of paying salaries to its employes, will pursue the same course toward them that the old negro woman did toward her son Jonas, which was this: "I jest mek him tek de book and set down on de flo, and den I say, 'Jonus, you tek ye eye from dat book, much less leggo him, an' I skins you alive.'"

MR. DAY K. SMITH, late train dispatcher on the U. P. R. R., and superintendent T. P. & W. R. R., but at present and to continue Northern passenger and immigration agent I. & G. N. R. R. at Chicago, is about embarking in the newspaper business in the latter city. We presume Mr. Smith has some money saved, and believes this to be the most expeditious and philanthropic manner of spending it. However, we wish his new *Enterprise* all manner of success. See advertisement in another part of this paper.

LIEUTENANT BOOTH, U. S. Infantry, relieves Lieutenant Philip Reade of charge of the Military Telegraph line in Arizona. According to army regulations no army officer is to remain on special service for more than two years. Lieutenant Reade, however, has had charge of the Arizona lines for nearly three years. The cause of his unusual detention, say the papers out there, is explained in one word—efficiency. The lieutenant was as popular with his subordinates as he was with the public, and both sincerely regret his departure.

Western Union Sweet Oil.

The Western Union official organ is as liberal with its sweet oil as Colonel Mulberry Sellers ever was. No matter how often the company may disregard its promises or repudiate its obligations; no matter what questionable devices it may resort to for the purpose of cutting another slice from the already by no means munificent salaries of the men who have spent the best years of their lives in its service; notwithstanding the distress, the pinching, perhaps the actual want that its recent spasmodic and ill-directed economy may occasion among its thousands of operators, the bland and obsequious official organ has the characteristic effrontery to come forward and gravely assure us that the late gradation of salaries will prove a positive blessing to the fraternity; in fact, that "there's millions in it" for the "dear employes." Hear what it says: "This careful management and vigilance in the limitation and control of the company's expenses [by a reduction of salaries], are ultimately for the real and permanent interests of the employes as well as of the company." This gratuitous slur upon the intelligence of the readers of the *Journal* in assuming that they have so far taken leave of their senses as to be capable of believing such twaddle, is eminently worthy the high source from which it emanates.

The official organ says truly that there has been cause for complaint that the salaries paid were so unequal as in some cases to work injustice. The only effectual remedy that the Executive Committee could see for this perplexing state of affairs, was "a thorough revision and re-adjustment of the salary lists." In other words, because a number of men out of employment, who had no place else to look for work, were forced to accept situations at about one-half or two-thirds what their services were in fairness value for, the remuneration of thousands of others who happened to be receiving somewhat higher salaries must be cut down that the amounts paid might be equalized.

It never struck the astute committee that the injustice to the inadequately remunerated men would be more equitably overcome by paying them a fair and just compensation for the amount of work they performed, than by reducing the salaries of thousands of others to conform to theirs. As well might the Western Union on some pretext charge one or two per cent. of its customers about one-third more than regular tariff rates, and when complaints were made, increase all its rates in that proportion so as to "equalize" the tariffs, then naively announce that the increase was made for the benefit of the respected public. Precisely the same thing.

But if salaries were to be "graded," and a reduction effected, did the Executive Committee nobly propose that, as they and so many other officers of the company were paid so large salaries for so little work, and, anyway, could so much better afford a reduction than poor, overworked, underpaid operators, they would grade salaries by reducing their own, and increasing the operators'? Not quite. That's not the kind of an Executive Committee they are. Their hearts beat more in unison with the feelings of the enthusiastic patriot who declared that he would sacrifice every one of his wife's relatives on the altar of his country rather than that the war should cease. The salaries of operators should be graded and reduced, but those of officers were to remain as

they were. And this the *Journal* wants us to believe will ultimately be "for the real and permanent interests of the employes." Stuff!

The Executive Committee will tinker at this salary question until one day there will be a grand explosion. The Vanderbilt party are at the bottom of this so-called "grading," as they were at the bottom of the sliding scale reduction. There are at least six members of the Executive Committee who have been placed there to look after the Vanderbilt interests, and, of course, being in the majority, they can do pretty much as they please. Mr. Orton is often held responsible for resolutions and matters that in reality he has been unable to prevent. We believe him to be a man, who, if he had his own way, would deal fairly and honorably with his employes. But he hasn't. His hands are tied, and he but carries out the orders of the Executive Committee just as an ordinary operator does that of his manager. The grading resolution was passed during Mr. Orton's absence in Cuba. So that it is the Executive Committee, and they alone, whom we may thank for sliding scales, salary gradings, and such favors.

The *Journal* says that it is assured that "there is no intention on the part of the managers of the company that through it [salary grading] injustice shall be done the employes." Yet what are the facts? Five hundred dollars is taken off the salaries in a single office, four hundred and seventy-five in another, and so on. One of this same Executive Committee visited a large office in this State, and inquired of the manager how much he could reduce his pay-roll. "I don't see that I can make any reduction," replied the conscientious manager. "The operators are all old men who have been in the business, and some of them in this office, since they were boys. They are perfectly faithful, steady, and reliable, and there is not one of them receiving more salary than he deserves." "Then hand me the pay-roll," demanded the Executive Committee man, and he marked in pencil opposite the names the reductions that were to be made on each salary. And yet no injustice is to be done employes! Oh! no, not for the world. No matter what may occur, the company is determined to render the operators happy—by rosy promises "only made to be broken."

The *Journal* says that it was not intended or expected that any considerable reduction of the total amount paid for services would result from the grading—that the object was merely to equalize salaries. Then superintendents must have woefully misunderstood their instructions. The Executive Committee, we are led to infer, simply desired that the amount taken from one operator's salary should be added to that of some other less fortunate brother. But what do the superintendents do? Reduce (with very few exceptions), every operator's salary, and turn the not inconsiderable amount thus obtained into the coffers of the great monopoly. Could anything be more transparent? True, a faint promise is made that hereafter there will be "a reasonable prospect of promotion, with a consequent increase of compensation." But what guarantee have we that the promise will be kept, or that it is not merely intended to make the blow of a general reduction fall a little lighter?

It is very evident that the sliding-scale was but the first of a series of systematic reductions of which this pretended grading is number two. This

latter, if tamely submitted to, will, just as surely as night follows day, be succeeded by another, and another, and another, so long as it is supposed that operators will stand it. If successive nips are thus to be bitten off the salaries, the question arises: where will the matter end, and what are operators to do in self-protection?

The Western Union boasts that it gets better results than the English Postal Telegraph people, by paying better salaries, and securing a higher class of talent, while it is all the time endeavoring to force salaries to the same or a lower level. Who is to blame that there has been a disparity in the salaries, and what guarantee have we that the grades now agreed upon will be adhered to—that from time to time it may not be found necessary to periodically re-grade and further reduce them?

The company imagines that it can reduce salaries with impunity because the operators are not organized, and can therefore take no concerted action in their own behalf. The official organ laughs in its sleeve, and tauntingly assures them with mock gravity that these reductions will "ultimately be for the best interests of the employes," while the company itself puts its finger to its nose—figuratively speaking, of course—and asks: What are you going to do about it? You have no protective organization to bind you together, and, therefore, after a little grumbling—which will have as little effect upon the Executive Committee as it would upon a marble statue—you will plod right along uncomplainingly until the next reduction, when the same programme will be gone over again with precisely the same result." What say our readers to a combination for mutual protection? This is the only manner, in our opinion, in which further sliding scales and gradations can be put a stop to. We should be glad to have the views of correspondents on the subject.

In Memoriam.

It is not the tear at this moment shed,
When the cold turf has just been laid o'er him,
That can tell how beloved was the soul that's fled,
Or how deep in our hearts we deplore him.

Roscoe Sprague, who died on the morning of April 10th, was a general favorite among his associates, by whom he was long since given the affectionate *soubriquet* of "Little Sprague."

A native of Portland, Maine, he, while quite young, entered the service of the Independent Telegraph Company in his native city, and afterward worked as operator for opposition companies in Providence, Boston, and New York, finally entering the employ of the Western Union Telegraph Company, and working for many years in the Cable Department at 145 Broadway. After the removal to No. 137 Broadway, he worked in the general office, holding his position up to Sunday evening, April 7th.

As an operator Mr. Sprague was one of the very best in the profession, and it was generally conceded that he made the handsomest "copy" in the New York office. Although his health had been failing for some time, his friends did not anticipate any immediate danger, so that his demise, caused by a sudden and acute development of dropsy, was quite unexpected.

He was in his thirty-third year, and his loss will be mourned not only by his immediate associates, but by hundreds of others who have

worked with "R S," and who will hear with genuine regret of his untimely taking off.

His last hours were passed in merciful unconsciousness. At half past twelve the attending physician was summoned to his bedside, where he remained until the feeble spark of life had sped.

In the operating room the first intelligence of his decease came like a shock. To his most intimate friends it seemed incredible. Men gathered in little knots, and spoke in low tones, vaguely wondering if there could be no possibility that the announcement was premature. Not a few turned quietly away, perhaps to check the sympathetic tear, while others denied the rumor, but without hope in their hearts. All were truly and sincerely sorrowful. To the members of his family, notably to a devoted and faithful brother, the entire fraternity extend their profound sympathy.

Blackboard Brokers and Indicators.

As already reported in THE OPERATOR, the Gold and Stock Telegraph Company issued notices recently to a number of blackboard brokers that their indicators would be removed by April 1 and the leases of their instruments be rescinded. Among others notified in such manner were Messrs. R. Hastings & Co., whose counsel, ex-Judge Koch, initiated proceedings against the Telegraph Company by procuring an injunction restraining it from acting as threatened, or from intercepting the transmission of quotations from the Stock Exchange. Tumble & Co. followed with a similar proceeding, and Kelly and Bliss also obtained an injunction of the same character from Judge Lawrence, in Supreme Court, Chambers, against the Telegraph Company. An order to show cause why the injunction should not be made permanent was also granted.

A Sixteen Page Paper Next Issue.

We expect to issue May 1st a sixteen page paper, and to send a free specimen copy to a large number of offices where we have not now subscribers. The object is to increase the usefulness of THE OPERATOR by adding to our list the names of as many new subscribers as possible. To many of our friends who formerly assisted us materially in the way of clubs, but who lately have not had an opportunity of doing much in that direction, this large edition will offer a chance of getting up clubs, which we rely upon their turning to a good account. As many extra specimen copies as may be desired will be mailed free. Drop a postal card early, saying how many you will require, and then do all you can when the paper is out, and in the meantime, to increase the circulation of THE OPERATOR. Personals for the large edition are solicited.

A CHANGE of officers has taken place in the Continental Telegraph Company. Mr. J. G. Case has resigned the secretaryship, and is to have charge of the offices in New York city. Mr. A. J. Baldwin has also resigned as general superintendent. The vacancies have not yet been filled. The wire, which is number six, and of unusually good quality, is now being made, and it is expected that the stringing will commence next week. The setting of the poles on the Philadelphia line is being rapidly pushed forward, and it is thought that the main office at 8 Broad

Street will be opened early in May. A branch office is to be established in this city at 96 Wall Street, another near the Produce Exchange, and others in the dry goods district, and in other localities. Judge Donohue has not yet rendered his decision in the Western Union "pooling" case.

In the opinions of men entirely great, gradation is a much better word than general reduction.

Echoes from 197.

James Buck, who has filled the position of all night man at Passaic, N. J., with great ability for the last three years, has been appointed agent at Clifton, N. J., a nice little town on the outskirts of Passaic. "Bi" is a brother of Morris Bruck of 197.

Miss Arbutnot is very ill at her home in Mont Clair, N. J. Miss Minnie Cottrell works "17 Erie." Miss Ella Carey has been transferred from the City line to 50 East. And last, but by no means least, Mr. O'Reilly has had his photograph taken, and the demand for them has been so great among the ladies that he purposes having several dozen struck off.

Themes for the Thoughtful.

Man doubles his evils by brooding upon them.

Company which does not help to improve us will certainly have a contrary effect.

The worst kind of men are those who do not care when men see them doing wrong.

Go straight on, and don't mind enemies. If they get in your way, calmly walk round them, regardless of their spite.

Conflict is the condition of progress. It is only when the battle rages in terrible earnestness that spoils are gained and crowns are won.

If any anger arise in the breast, instantly seal up thy lips and let it not go forth: for like fire, when it wants vent, it will suppress itself.

Without religion there is a void in the human heart that science and art, philosophy and reason, or all worldly things combined, are inadequate to fill.

Patience under persecution is a Christian virtue; but there are times in the history of communities, as well as of individuals, when silence is sin and submission a crime.

God so joins by bright expectation the present with the future, that one glides gradually into the other, so that the eternal life commences on earth and completes in heaven.

The true secret is to make a business of being happy with what you've got; and then, when good fortune tumbles into your lap, you will be prepared to appreciate it. You have already more than you deserve, and that ought to satisfy you.

The greatest loss of time is delay and expectation which depends upon the future. We let go the present which we have in our power, and look forward to that which depends upon chance—and so relinquish a certainty for an uncertainty.

A good name is best won by good deeds. There is no surer way of being well thought of as by deserving well. "You have a little world around you," wrote Daniel Webster to an early friend; "fill it with good deeds, and you will fill it with your own glory."

If we would be perfect we must part with much that we have, leave much that we love, forego much that would be pleasant—not to flesh and blood alone but to mind and heart. You need not go into the wilderness, but at times you will know what it is to feel solitary and alone. If you try to be perfect you will at least know the taste of the bread of affliction, and your tears will sometime be your only drink.

Live for something. Do good, and leave behind you a monument of virtue that the storm of time can never destroy. Write your name in kindness, love, and mercy on the hearts of the thousands you come in contact with year by year; you will never be forgotten. No, your name, your deeds, will be as legible on the hearts you leave behind as the stars on the brow of evening. Good deeds will shine as the stars of heaven.

Albany Wire Club.

When President Fancher called the meeting to order, he stated that he had received information which he considered reliable that the salaries were to be graded—the grade to go into effect April 1st. He moved that a resolution be presented to Manager Rugg, asking that the salaries of the higher priced men in this office be reduced, the sum thus saved to be added to the salaries of the cheaper men. (Applause from the low priced men.) He thought that any unprejudiced person would admit that he was contributing his services to the company for at least eight dollars a month less than their actual value. Mr. F. S. Smith (better known to the fraternity as "Snork") said that although he was going home to-morrow, he felt himself called upon to second Mr. Fancher's motion, especially that portion relating to an advance in his (Fancher's) wages, as in that case he (Smith) would find it convenient to return to Albany after next pay-day in order to afford Mr. Fancher an opportunity of enjoying a few days much needed rest which that gentleman felt too poor at present to indulge in. Evans objected to leaving the business, as he had passed a great many pleasant hours in the office—particularly since he had been on the N. Y. quad. Coats thought that difficulty could be overcome, as em quads could be had in any printing office. (Faint cries for "water.") George Smith thought that the perpetrator of such vile puns should be compelled to work the Vermont wires for the next six months. Fred Warriner proposed that Manager Rugg be elected an honorary member of the Wire Club. Carried. Patsey Clark and William Kelly were appointed a committee to wait on Mr. Rugg, and ask his acceptance of the honor. A rumor that the gradation of salaries had been announced caused an immediate adjournment for two weeks.

Scientific American Answers to Correspondents

How can I make a permanent magnet with a horseshoe magnet? *Ans.* If you wish to make a hardened steel bar magnetic, draw one end several times in one direction, over one pole of the horseshoe magnet, and draw the other end of the bar in a similar manner over the other pole of the horseshoe magnet.

How is a Smee battery made? *Ans.* It consists essentially of two plates of amalgamated zinc, held by a metal clamp, so as to face each other, forming the negative pole of the battery; and a plate of platinum or silver, supported by an insulation, placed between the zinc plates forms the positive pole. The exciting fluid consists of about 10 or 15 parts of rain water to 1 part of sulphuric acid.

1. Will the telephone work on a telegraph wire having 2 sounders on, with different sized magnets? *Ans.* Yes. 2. How many cells of a gravity battery will be required to work 4 sounders on a telegraph line 300 feet long? *Ans.* About 3 cells. 3. Will a lightning rod make a good ground wire? *Ans.* That will depend on the size and conductivity of its earth connection. 4. Does it require more battery power to operate sounders of a different number of ohms? *Ans.* Yes.

Can the ordinary Bell telephone be used on a telegraph line without interfering with, or being interrupted by, the regular telegraphic messages? *Ans.* There is an inductive effect produced by the proximity of other telegraph lines running parallel with the telephone line, but this inductive effect may not, except in some cases, be regarded as a radical interference. Your question may answer to tapping the main line. In that case, our answer is, no; but the greater the resistance of the wire on each telephone magnet, the less will be the interference with the Morse signals which are being transmitted over the line which is thus tapped.

What will be the simplest mode of constructing a short telephone line, of 50 rods or less, and how should the wire be insulated? *Ans.* Glass is the material most generally used for this purpose. You can insulate your main line by supporting it on the ordinary glass insulators which are in use on most telegraph lines, or you may improvise an insulator by using the necks of broken bottles mounted on hard wooden pins, driven into the poles or trees, and securing the main line to each bottle neck in succession, by means of a short piece of wire twisted tightly around the bottle neck and the main line.

I am informed that, where a battery is used on a Bell telephone line, connecting the wrong pole of the battery with the telephone will weaken and eventually destroy the power of the magnet even

where the telephone is only let into the line when in actual use. If this is so, what is the proper way to connect a line from a Callaud battery through the "vox" telephone? *Ans.* Connect the battery so that the passage of its current through the spool of the telephone magnet will tend to increase its magnetism, as may be seen by the variation of a magnetic needle placed in its vicinity. 2. For an ordinary telegraph line, 1 to 5 miles in length (ground circuit), containing from two to six 5 inch electrical bells, what would be the proper resistance for the bell magnets? *Ans.* About twelve ohms each. 3. About how much Callaud battery would be required to work the bells well for signaling by single stroke? *Ans.* About 30 cdfs. Could they be worked properly on a line 15 miles long without local battery and relay? *Ans.* Not properly, as it would be expensive to use such a large main battery as would then be required.

1. How can I make a telephone? *Ans.* On the pole or poles of any form of electro-magnet, of which the core consists of a bar, or U-shaped permanent magnet, lay a small disk or sheet of very thin iron or common tin. Inclose the whole in a cardboard cone, the small end of which is open, and is placed in the ear so as to act as a speaking trumpet to convey the vibrations of the thin sheet of iron or tin which faces it, to the drum of the ear. This completes one telephone, for one end of the line, and the other telephone, for the other end of the line, should be made just like it; and the wire which forms the electro-magnet should be of the same diameter and length in one instrument as it is in the other. 2. How can I attach a telephone to a telegraph wire three miles from any office, so that I can read what goes over the line? *Ans.* By tapping the main line; connect one end of a short piece of wire with the main line, and connect the other end of the short piece of wire with one binding post of the telephone, then connect the other binding post of the telephone with the ground. 3. Can we use two telephones to converse with over three miles of railroad telegraph line? *Ans.* Yes.

Dashes Here and There.

All the Police stations in Boston have been supplied with telephones.

A telephone is to connect the Department of Home Affairs with the Bureau of Police at Tokio.

Remark by the man who has just let go of the electric machine—"Go feel what I have felt.—N. Y. Commercial.

Mrs. Cramm's husband, who is in the West, occasionally sends her a telegram, and she says she must tell him, the next time she writes, not to sign his despatches "Coll." Every one thus signed, she says, she has to pay for, but when they come without the "Coll," they don't cost her a cent.

The young Spanish King, being separated from his bride by the rigid court etiquette and public affairs for several days each week, had his private apartments connected with her palace by a telephone, through which the royal lovers communicated without interference or annoyance.

It is reported that President Vanderbilt, of the Central and Hudson River Railroad, has issued an order increasing the hours of labor in the various shops, and reducing the force of men in proportion one-fourth, the order to take effect April 1. The number of men is to be kept down to the lowest possible limit.

Mr. John J. Powers, a well known telegrapher shot himself in the head in the coat room of the A. & P. Telegraph Company in Chicago, on Saturday night, April 6th. He died about three o'clock Sunday morning. Domestic troubles are said to have been the cause of the suicide. Mr. Powers attempted self destruction on two former occasions, but was frustrated each time.

Experiments with a new telegraph apparatus have lately been made at Vienna, by means of which some one hundred or one hundred and twenty messages may be sent by a single wire in the remarkably short space of one hour. Under certain conditions this number may even be raised to two hundred or even two hundred and fifty messages. The inventor of the new apparatus is Herr August Eduard Granfeld, an Austrian telegraph official. At the end of December he presented to the Austrian "Telegraphenanstalt" eight working and two principal apparatus of his invention for practical trials. The experiments are reported to have been crowned with complete success.

The Cincinnati Commercial says, that there was a lively little time in the Western Union Telegraph rooms during the thunder storm about noon of Tuesday, when the operating room was ablaze with electric light. At last the window, through which the wires enter, was set on fire, and the sash and frame ignited, and blazed up brightly, but the operators managed to extinguish them before any material damage was done.

The Society for the Prevention of Cruelty to Children in San Francisco is taking up the case of telegraph boys who are overrun with their manifold duties. In this city it is the citizens who should be protected from the wild message boy who comes swooping along like the lightning he works for, on his ferocious velocipede. However, as a general thing, the boys are very dexterous in the management of their fiery untamed steeds.—*Detroit Free Press.*

DANGERS OF THE TELEPHONE.—Mr Basingbal (city merchant)—"Most convenient! I can converse with Mrs. B. just as if I was in my own drawing room. I'll tell her you are here." (Speaks through the telephone). "Dawdles is here—just come from Paris—looking so well—desires to be," etc., etc. "Now you take it, and you'll hear her voice distinctly." "Dawdles—" "Weally!" "Dawdles takes it. The voice—" "For goodness sake, dear, don't bring that insufferable noodle home to dinner!"

It is strange that a benighted country like Spain should be ahead of the United States in the matter of the electric light. The illumination problem has passed beyond an experiment in Madrid, and is now a fixed fact. The principal square in that city has for some time past been flooded with electrical beams. The lamp posts are two in number, each having six globes of opal glass in sets of three. They are about twice as tall as ordinary lamp posts. A person can read a newspaper easily at a distance from them of thirty or forty yards.

A correspondent sends us a poem on the telephone which he found in a recent German paper. The following diabolical words serve as the introduction:

"Der altpersische Fernsprecher, der Urvater des jetzigen, erhält folgenden uns zugehenden Strophen die iumgebührende Anerkennung."

The poem itself bristles over with many others equally as atrocious, such as Schuldigkeit, Entfernung, etc. (Our readers, we are sure, will be pleased to learn that we promptly hustled the villainous production into the waste-basket.)

A paragraph is going the rounds of the papers which states that there are 79,000 miles of telegraph wire in the United States and 6,850 offices, or one mile of line to every thirty-six square miles of area. England has 75,000 miles of line and 5,600 offices, or one mile of line to every one and a half miles of area. Russia has 31,500 miles of line and 900 offices, or one mile of line to every 530 square miles of area. The item, however, as regards this country is not correct. The Western Union alone has very considerable more than either 79,000 miles of wire or 6,850 offices. But probably the paragraph originated a number of years ago.

A writing telephone is the next step in advance. Abbe L'Espoir is the inventor. He proposes to separate the recipient, and to fix one of the conducting wires to an iron plate and the other to a stylus slightly rounded at the extremity. Between the plate and the point which are intended to complete the circuit, a paper band, properly prepared, is caused to move when the telephone is in operation, and the black marks made upon the paper will denote what the sound at the transmitting end conveys. It is supposed the telephone can be so arranged that it will record at one end what is spoken at the other, whether there is any one in the receiving room or not, and the absent party can read the message on his return.

Mr. Edison's phonograph was introduced to a British audience recently at Mr. W. H. Preece's lecture on the telephone, given before the members of the Royal Institution and a distinguished company of scientific and literary celebrities, and the success of the experiments was greeted with a storm of applause. In the course of the experiments with the telephone Mr. Alfred Tennyson, who was among the audience, was invited by the lecturer to listen to the sounds of a bugle played at Southampton. Mr. Tennyson, however, could only hear what he described as "little explosions and an enormous buzzing," which Mr. Preece accounted for by explaining that the great debate then going on in the House of Commons was causing thousands of messages to be sent all over the country.

And now it is asserted that the telephone was invented many years ago and forgotten. It is generally supposed that Reiss, in 1861, was the first to use vibrating membranes or thin plates. Old journals have, however, been found containing an account of a new musical instrument invented by M. Petrina, of Prague, who is stated to have constructed "an instrument with keys which by a galvanic current sets a small iron plate into vibration as soon as the hand laves the key. Each key produces a different tone, and the tuning and use are similar to that of a pianoforte. A second instrument put at a considerable distance is connected with the other in such a way that the music played on the one re-sounds from the other." This appears to be a musical telephone put in practical form long before any now known.

LONDON TIMES ERRATUM.—We are requested by Reuter's Telegram Company to correct an erroneous announcement made in their Brisbane telegram of the 2d inst., published in our impression of the 5th inst., stating that "Lady Kennedy had given birth to twins, the eldest being a son." The Company explain that the message they received contained the words Governor of Queensland, "*twins first son*." Being, however, subsequently informed that Sir Arthur Kennedy was unmarried, and that there must be some mistake, a telegraphic repetition was at once demanded. It has been received to-day (March 11) and shows that the words really telegraphed by Reuter's agent were Governor Queensland "*turns first son*," alluding to the Maryborough-Gympie Railway in course of construction. The words in italics were mutilated by the telegraph in transmission from Australia, and reaching the Company in the form mentioned above gave rise to the mistake.

Soon after midnight March first, the good folks of Madison, Wis., were thrown into a state of great excitement by a rumor that dispatches had come over the wires to the effect that President Hayes had been shot by the British Secretary of Legation; afterward, that his own private secretary, Rogers, had become suddenly insane and assaulted the President with deadly result. The stations all along the line were called by Superintendent Has-kins, and at three o'clock in the morning answer came from Chicago that the rumor was true. Intense excitement prevailed throughout the city in the morning, as soon as the news spread around, and the newspaper and telegraph offices were besieged by eager inquirers; at those points, however, the story was believed to be a hoax, and telegraphic investigation finally proved it to be so. As near as could be ascertained, the story was started by some lunatic of a commercial drummer at Evanston, Ill., and from thence telegraphed over the Northwestern States.

HE WASN'T USED TO IT.—Verdi, the eminent artist, who, being a foreigner, is not well up in American inventions, retired to his room in San Francisco a few nights since, and, after partially disrobing himself, was startled by fearful noises from an adjoining room. On the still midnight air came these words: "Give me the gold—I must have the money now!" and the reply "Monster! would you murder me? Help! help! help!" Verdi had just learned enough about the American District Telegraph Company's instruments to know very little about them, but he started for the box in the hall in his *robe de nuit*, and called successively for all that was on the dial. Directly his calls were answered. A ton of coal, a policeman, a doctor, a messenger, and a squad of the fire brigade appeared, and the terrible tragedy resolved itself into a private rehearsal between the leading man and the heavy villain of an amateur troupe, both of whom were found snoring in their beds when the avenging mob burst open their bedroom door.

The loyal subjects of her Majesty at Esquimaux, British Columbia, had a bad scare the other day. The telegraphic cable between San Juan and the Lopez Islands broke—probably talked to death by the immense Russian names with which it had to wresle during the past few months. The breakage occurred just at the time when war between England and Russia seemed imminent, and the news was left, like an interesting story, "to be continued." At this critical moment a Russian man-of-war put into Esquimaux for repairs. The valiant Britishers first thought they would open fire on the ship with their mountain howitzers. However, the Governor concluded it would be best to make assurance doubly sure, so he sent a boat over the Straits of Fuca to Port Townsend, the nearest point in the United States, to find out whether it was

peace or war. It turned out to be the former, and so that Russian war vessel still floats on the Pacific.

THE TELEPHONE IN GERMANY.—The London *Telegraphic Journal* says that Dr. Stephan the Director-General of Postal Telegraphs, North Germany, has issued printed instructions as to the use of the telephone. Special offices in connection with the ordinary telegraph office will be opened for the telephonic messages. When a telephonic message is to be sent, the telephone office will request the other office to connect up for telephone sending. The sender is enjoined to speak slowly, clearly, and without forcing the voice, the syllables being carefully separated, and all accurately pronounced. A pause is to be made after each word to allow the receiving operator to write it down. The latter verifies the number of words sent and rapidly repeats the message as he receives it for correction. To ensure secrecy, the telephones are kept in a private office, and the operators are forbidden to disclose the names of the parties to the message. The charge is fixed at so much per word as in ordinary messages.

LIGHTING CITIES BY ELICITRICITY.—Experiments were recently made in San Francisco with an improved electric light, which is claimed to be an improvement on the one now coming into use in France particularly, and Europe generally. The light produced is so brilliant that it cannot be looked upon with the naked eye without dazzling and injuring that delicate and most sensitive organ, it being even less painful to gaze upon the sun. One wonderful feature of this light is that any and every color is easily seen; the colored threads in various fabrics, the bright green of the grass and the colors of flowers were brought out as distinctly as in daylight. By an ingenious device a light can be made self-supplying for the longest night. It is self-feeding, and can be burned as long as desired. Twelve jars and a coil will be required for each light, save where two are in the immediate neighborhood of each other, as on either side of a hill, when one set of jars and one coil will answer for both. The plan and ingredients are kept a profound secret, but the inventors claim that they can light the city for \$100,000 a year, which is only one-third the present cost of gaslight. Their experiments excited the wonderment of those who witnessed them, and proved highly successful.

TELEGRAPHY BY MIRRORS.—Some experiments are about to be made at the Marseilles Station, the effect of which, if they should prove successful, will be once more to revolutionize the art of railway signalling. This apparatus is described as consisting entirely of mirrors, which seem to be arranged all along the line so as to communicate with one another, and with the last of the whole series, which is, of course, set up in the station itself. In these days no such system could be perfect without the aid of electricity. Accordingly the mirrors are to be "electric mirrors;" and though the term does not immediately convey a very accurate meaning to the unscientific ear, it is possible, after our experience of telephones and phonographs, to imagine that these may have at least tenfold the reflecting power of an ordinary looking-glass. This must be the case if, as is asserted, the new machine will exhibit to the spectator a faithful picture, of one hundred miles of line. The surface of the glass will, according to the account, form a little panorama upon which will be seen all the trains passing for the time being over that expanse of line. They may be watched like pretty toys, ascending inclines and then descending them again, passing one another, and perhaps occasionally overtaking one another rather too fast. In the latter case it will of course be the duty of the station agent or train dispatcher whose eye is continually upon the mirror, to interpose and prevent mischief. The invention is one to delight the hearts of station agents all over the world.

The Telephone.

The telephone concert last night developed one strange fact that undoubtedly was not on the programme. While Professor Johnson was testing and getting into shape in the afternoon his telephone for use in the evening, the singing by the people in Buffalo was plainly heard through the telephone in Mannel's store on Front Street. The store is connected by a wire with the Rochester Brewing Company on Lake Avenue; and yet an investigation showed that the Brewing Company wire did not touch at any point the wires of the Western Union Telegraph Company, which were used in transmit-

ting the electricity which reproduced in Rochester the sounds made in Buffalo.

A similar state of things occurred in the evening during the concert, but the telephone line affected this time was that running between Amsden's ticket and insurance office, in the basement of Powers' block, and the office in the depot. The cornet solo and the singing of the performers in Buffalo were plainly heard in the telephone in Mr. Amsden's office. An investigation brought to light the astonishing fact that the only point where the Amsden telephone wire and the Western Union wire used in the concert approached one another was near the Waverly Hotel, but that even there they were not less than ten feet apart. No nearer connection than this could be found between the two wires at any point, so that in some mysterious way the current of electricity must have been transmitted from one wire to the other through not less than ten feet of air. The people in the office at Amsden's once before noticed that sounds were produced in their telephone by the people using the line of the Vacuum Oil Company, though the two lines are entirely separate, and do not approach each other at any point within several feet. This we regard as one of the most wonderful developments yet of this mysterious force of electricity, but perhaps the electricians will be able to give some explanation of the fact, which is well attested.—*Rochester Paper.*

The New York Wire Club.

"Roll up your curtain! Let the show begin!"

Thomas Finnegan was elected doorkeeper by a unanimous vote. He arose and testified his acknowledgments for the honor conferred, incidentally endeavoring to impress upon the minds of the members that punctuality and promptitude in attendance would be rigidly enforced by the new administration. As under the circumstances it would be impracticable to give tardy individuals a 12 to 9 tick, he should content himself by simply mulcting each offender for the "price of the lager," the legitimate perquisite of his office. As the time-worn veteran navigated the crowded aisle with his habitual cautiousness, he was greeted with a storm of applause, and such cheery gratulations as "you'll get your voucher," "you'll lose your job," and other consoling remarks. C. E. Davis dropped the gavel, and after roll call, which showed every member present, Denis Brown stated that he would now call upon a gentleman from whom they would all be glad to hear, whose name was justly celebrated both in the counting house and in the forum, not only in this metropolis, but throughout the northwest. He referred to Giles N. Howlett. (Cheers.) Mr. Howlett said that in the silent watches of the night he had reverted to a theme fraught with the deepest import to the telegraphic fraternity; he firmly believed the recent de-gradation by the Western Union Company was a direct assault upon the divine institution of marriage. (Loud applause.) Miles O'Reilly sang "Over the Hills to the Poorhouse," with a clearness of tone and a delicacy of shading which surprised even those most familiar with this gifted artist's accomplishments. Tom Finnegan whistled the accompaniment with great earnestness and gravity. Jerry Borst's thoughts were of by-gone days. He remarked "that memory can glean, but can never renew. It brings us joys faint as is the perfume of the flowers, faded and dried, of the summer that is gone." (Applause.) The chair stated that he had been requested by David B. Mitchell and W. H. McEnroe, representing the British reserve and Irish "skirmishing fund" respectively, to bring up something of a warlike nature. He was happy to announce to those gentlemen that at the next meeting of the club there would be manipulations of the cannon ball by Oscar Kraft (applause). The meeting then adjourned.

Boston Notes.

The Committee on Mercantile Affairs has reported in the Senate a bill incorporating E. P. Carpenter and others as the State Union Telegraph and Telephone Company, with a capital of \$1,000,000, which must be paid in before the company begins business, with the privilege of increasing the amount to \$10,000,000. The company shall be under the management of twenty-five trustees, five chosen each year for terms of five years each.

The Gold and Stock Telegraph Company, an offshoot of the Western Union, having recently come into the control of the old District Telegraph concern, has transferred the main office of that com-

pany to the basement of the Old State House on State Street. The new management are determined to increase the efficiency of this useful branch of public service to the high standard reached in the district telegraph systems of New York, San Francisco, and other cities. Under the active supervision of the present directors, the work of rebuilding and repairing the various lines of the old concern, and thoroughly overhauling and improving the entire service of the company, have been vigorously pushed to a satisfactory conclusion. The boys in the employ of the company are to be uniformed in a style similar to those employed in New York, and it is the intention of the management so to add in other respects to the discipline of the force as to create a thoroughly effective district telegraph system. Mr. Charles Poole, late of "He" office, has accepted a position with the New District Company, Mr. Thomas A. Greene being transferred from general relief duty to fill the vacancy at "He" office. Mr. James Malone, of the Western Union office, Portland, Maine, visited this city last week, and called on his friends at 109 State Street.

Chicago Notes.

M. E. Cozzins, of Green Bay, Wis., who has been out of the business for quite a number of years, has recently been added to the "get-all-the-work-you-can" force. J. M. Quigley, of Milwaukee, and recently with A. & P. in this city, is now on the extra staff of the W. U. Co. Malcom Campbell, of New York, is contending manfully with Mr. Cozzins on the same trick. Thomas Dudley, lately with the A. & P. at Buffalo, has accepted a position with the Board of Trade Telegraph Company in this city. We welcome "Tom" to the Garden City, where his ability as an artist has long been known. Bob Hayes, who has been rusticated at Thompson, Ill., is in the city. Judging from the following message sent by the proprietors of the Janesville, Wis., "plug factory," to our "representative man," the channel of honesty does not always run smoothly in such institutions, and for the good of the fraternity, and in all kindness to the students, we are glad of it. F. W. James, J. B. Martin, known to many of our operators, robbed two students of one hundred dollars each, and ran off to-day. Tell all operators. Valentine Brothers. The Chicago and Milwaukee Boards of Trade have resolved to construct and operate wires between this city and Milwaukee, making the tariff one cent per word. Milwaukee Board has already subscribed eight thousand dollars for the purpose. Western Union folks are consequently agitated, and "the boys" are figuring closely for positions with the new concern. This will considerably reduce the volume of Western Union business between the two points, so that they can "really" only afford to pay sixty-five dollars a month for doing work.

XERNES.

PERSONALS.

U. C. Palmer is operator in train master's office at Truckee, Cal.

Mr. J. P. Wooster has resigned at St. Marks, Fla., and been appointed assistant agent and operator at Bainbridge, Ga. Mr. Burch, lately operator C. C. and A. R. R. at Columbia, S. C. is his successor.

H. Wales and Captain Davison, two old time R. R. operators, are still at Colfax and Gold Run, Cal., respectively.

H. L. Pray, formerly of the Sacramento A. & P. office, Cal., is on the Western Union day force same city.

J. B. Thurman, well known throughout California and Oregon, is again with the C. P. R. R. at Blue Canon.

Mr. Albert Hatch, late operator at Petersburg, Ill., has been appointed agent at Tallula, vice W. D. Murdock resigned.

T. P. Lee, formerly with the A. & P. at Sacramento, is working as operator in Division Superintendent's office in that city.

P. H. Mahoney, a graduate of the Delaware, Lackawanna and Western R. R., is telegraphing for the C. P. R. R. at Emigrant Gap, Cal.

Braidwood, Ill., has a hand car which on Sundays is kept hot. Many a fair damsel watches for it patiently. It is called "The Sparker."

Mr. R. D. Riley, of A. & P. office, N. Y., sailed for Cuba on the 9th, intending to be absent a month. We hope "Rus" will enjoy the trip, and be generally benefited by it.

Rumors say that F. S. Packard, operator for Chicago, Wilmington, and Vermillion Coal Company at Braidwood, will soon "join the band"—says "it is not well for man to be alone."

Eugene DeVoe night operator at Pontiac, Ill., will soon make a young lady of that place happy by sharing with her his hand and salary. So says Mrs. Grundy by telegraph.

At the Chicago Exposition Building, A. C. Gardner manipulates the wires for T. A. Fonda. At the local front office foot of South Water Street, Frank McMillan is in charge. At 83 Clark Street, Mr. Bowers is superintendent, Hudson's right hand man.

MEMPHIS AND LITTLE ROCK RAILROAD ITEMS.—W. E. Everett has charge of the wharf boat at Hopefield. N. Smith is agent and operator at Edmonson, W. J. Prudel at Blackfish. J. N. Rotton at Madison, vice J. Lange removed. Frank Stockton is Western Union operator at Forest City, vice Nat Graves transferred. O. Manns still holds forth at Rolstein. Frank Biggs is agent and operator at Goodwin. H. B. Garrison is Western Union operator and agent at Brinkley, ably assisted by the famous Tom Cass. Ben Wilson, an old timer, does the river and rail business at Droall's Bluff. Geo. T. Scranton still holds the little city of Carlisle down. William Penmon, the billiardist, is still agent and operator at Lauski. At Argenta we find George Alexander Stone keeper and operator. George does business like a grown person.

BALTIMORE NOTES.—Next to the grand ball of the telegraphers of this city on the 4th of February, the event of the season among the telegraphic fraternity of this city, was the marriage of Mr. William A. Dunn, long a popular member of the profession, and formerly manager of the P. & A. office, to Miss Ida Goodhand, one of Baltimore's fairest daughters. A large and brilliant assemblage met at the Fayette Street M. E. church on the evening of April 2d, to witness the ceremony. The happy couple left the same evening for an extended tour in the north. The profession was largely represented on the occasion. Messrs. C. C. Wolf, of the W. U. C. F. McCulloh, of the American District, H. H. Craig, of the Gold and Stock, and H. H. Smith, formerly of A. & P., acted as ushers.

The telegraph interest of New Haven is centered in two offices, the Western Union and the Atlantic and Pacific. J. M. Fairchild manager of the former, has been quite busy lately, introducing a new telephone in connection with the American District Telegraph. The day force consists of Fred. Fairchild, Dick Hubbard, Henry Fairchild, Page, Hart, and Miss L. Hubbard. C. P. Rousseau takes the "all night trick." W. R. Hendricks still wields the key at the New Haven depot, assisted by Gay. In the A. & P. office, M. J. Mallahan has been appointed manager, vice Geo. W. Coy, resigned. He is assisted by E. Hoffmann, day man, while W. P. Weaver takes press nights. Geo. W. Coy revels in the title of superintendent of the Bell District Telephone Co., and is doing well in his new business.

NOVA SCOTIA ITEMS.—At Halifax, the W. U. has seven operators, beside Manager Hoyt. Ned Elliott and Robie McLearn, may be put down as A. No. 1. At Windsor Junction we have two first-class men, Frazer and Borden, working for the I. C. R. and W. C. R. At Mount Uniacke we have McDonnell, formerly a G. T. R. man; Ellershouse is well cared for by Mumford. "Dan" is a first-rate fellow in every way, especially for story telling; Newport is run by young Sweet. Dixon manages matters for the N. C. R. at Windsor, in a style peculiarly his own. The Western Union interests at this place are well looked after by Miss Scoullar and Miss Harris. Then follow several way stations too numerous to mention, presided over by good men. We now come to Kentville, the headquarters of the W. and H. R. Here we find Bailey, the obliging and pleasant dispatcher for this company. "X" is a nice fellow, and a good man to work with. At Berwick they have Lydiard, Middleton is cared for by Dow; Bridgetown by Crosskill. Stopping at Annapolis, the terminus of the W. and A., we find Miss Moore and Mr. Lydiard.

DEATHS.

March 18, of heart disease, Mrs. Hannah L. Brower, Manager Western Union Telegraph Company, Pottstown, Pa. The deceased leaves an only daughter, who has the sympathy of many friends in her sad bereavement.

BIRTHS.

March 2, to Mr. Charles H. Smith, manager P. and R. depot, Harrisburg, Pa., a son. First edition.

Saturday, March 30, to Mr. M. Wilder, manager Western Union Telegraph office, Trenton, La., a boy.

MARRIAGES.

EITEMILLER—WINTON.—March 21, at McConellsburg, Pa., by the Rev. H. B. Winton, George M. Eitemiller, to Miss C. May Winton, daughter of the officiating clergyman.

CLEMENTS—PEARCE.—March 27th, at Milton, Mass., by the Rev. Dr. Morrison, Mr. William H. Clements, agent and operator at North Easton, to Miss M. Eva Pearce.

SLAUSON—NOBLE.—March 10, at the residence of the bride's parents, Mr. Lewis Slauson, operator at Braidwood, to Miss Mary Noble, of Wilmington, Ill.

FOX—FISHER.—March 9, at the residence of the bride's parents, Robeson, Pa., by the Rev. B. D. Zweig, of Reading, Mr. Reuben Fox, night operator, Robeson, to Miss Valeria Fisher.

HENDERSON—SMITH.—March 21, at St. Johnsburg, Vt., by the Rev. M. C. Henderson, Mr. O. H. Henderson, ticket agent and operator Connecticut and Passaic Rivers R. R., St. Johnsburg, Vt., to Miss Clara J. Smith of Woodstock, N. H.

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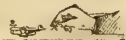
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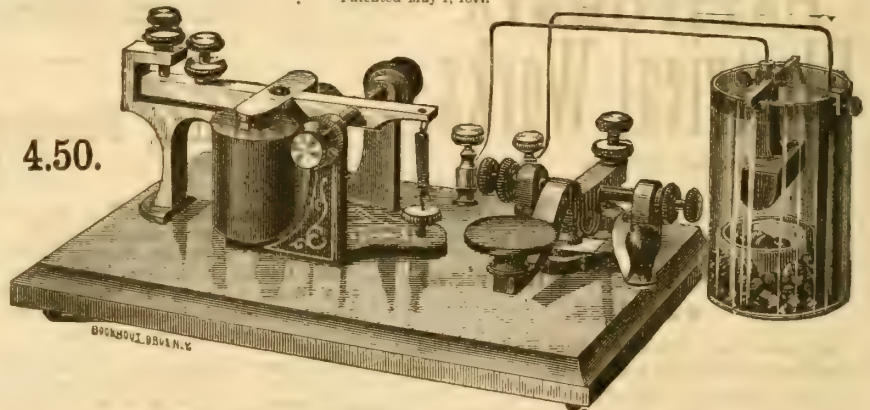
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VOL. IX.

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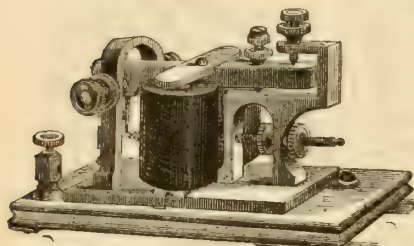
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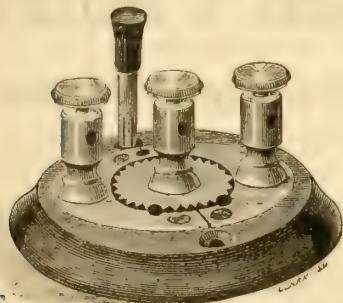
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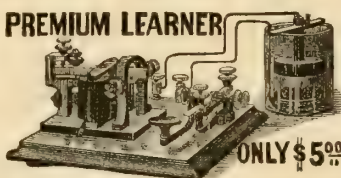
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THE SECRETARY of the Telegraphers' Mutual Benefit Association, in his annual report, says that fourteen out of the sixteen deaths of members during the year were caused by consumption. This fell disease being the result of close confinement, lack of fresh air, and insufficient physical exercise, it surely behooves telegraphers to do what they can toward, as far as possible, counteracting the effect of long hours and close confinement. Everybody requires exercise, and probably telegraphers, bending over a desk for ten or twelve hours a day, stand more in need of it than any other class. We have introduced to the profession the Goodyear Pocket Gymnasium, an invention designed not only for lifting, rowing, and the like, but which also combines all the advantages claimed for the Health Lift, with such as are secured by the ordinary gymnastic exercises. These tubes, besides having a very large sale among telegraphers, have everywhere given eminent satisfaction. They are selling by the thousand among the general public, and are everywhere considered the best apparatus for physical culture in the market. This system of exercise is purely reactionary, the contraction of the elastic material securing the double pull, which is deemed so advantageous. The accurate graduation of the appliances, and their great range of power, adapts them alike to young and old—to the feeble as well as the stalwart. Here, then, is exercise, and all that the name implies, in the most inexpensive and portable form. Here is the best method of accumulating strength and elasticity; of warding off disease; of securing that physical and mental tone which ever accompanies vigorous health.

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No. 3.—" " " 8 to 10 "..... 1 20	No. 6.—" Gentlemen of moderate strength..... 1 50
No. 6.—With handles, screw-eye, and hook.....\$1 75	No. 8.—For Gentlemen of extra strength.....\$2 50
No. 7.—Used by Ladies, Children, or Gents.....\$2 00	Goodyear's Patent Health Lift Complete.....\$5.00

Nos. 6, 7 and 8 are fitted with a screw-eye and hook, to attach to the wall or floor. A pair of No. 7 (\$4.00), or 8 (\$5.00), makes a Complete Gymnasium. Extra hooks, 5 cents each, or 60 cents per dozen. "BLOOD AND BREATH." By Prof. J. E. Frohisher, to accompany Goodyear's Pocket Gymnasium. Price 25 cents.

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THE OPERATOR

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SCIENTIFIC & PRACTICAL TELEGRAPHY

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Volume IX.

Whole No. 101.

Seest Thou the Lightnings?

Seest thou the lightnings as they go,
Swiftly along the swaying wires?
Hearst thou their whisp'ring soft and low,
Of yearning hearts' most fond desires?

Hearst thou the laugh so gay and light,
As gladsome tidings oft they bring?
Hearst thou the wail of grief at night,
As saddened notes of woe they sing?

They dwell in winds at noon of day,
On Atlantic's green and mossy shore;
At one they kiss Francisco's bay,
And listen to her wild waves roar.

America's Goddess imparts a kiss
As they leave her bright and sunny land;
Then out they fly thro' gathering mist,
Beyond the billowy ocean's strand.

Down in the sea where the mermaids sleep,
Away they speed beneath the tide;
Up Britain's mounts they blithely leap,
The bridled spark, the nation's pride.

Sudden Death of President Orton.

The city was startled last Monday morning, April 22d, by the report of the sudden death a few hours before of Hon. William Orton, President of the Western Union, International Ocean, Gold and Stock, and Southern and Atlantic Telegraph Companies. The announcement was so much of a surprise both to telegraphers, Mr. Orton's associates, and the general public, that all were inclined to regard it as a mere stock-jobbing canard. The flag at half mast over the Western Union building soon dispelled this hope, however, and the matter became the all-absorbing topic of conversation. Among the officers and employés of the company the news caused sincere mourning. They had not only learned to admire the deceased president for his untiring devotion to the important trusts committed to him; the unswerving integrity of his nature, and his marked executive ability, but those intimately acquainted with him had come to regard him with feelings of devoted attachment; and now that death had removed him forever from their midst, the realization of their loss came with all the force of a personal bereavement. Nor was the regret among the general public much less profound and heartfelt. No man has passed away in a long time who seems to have been so universally esteemed as was President Orton.

Although Mr. Orton had apparently been in his usual health up to the time of his death, he had for months been subject to dizziness and pain in the head when applying himself assiduously to work. This was noticed by his friends, who urged him to take a long vacation for rest and recuperation. At the meeting of the Board of Directors on the Thursday preceding his death, three months' leave of absence was voluntarily tendered him. This he had accepted, and was making preparations to sail during the first week in May on a visit to the Paris Exposition, working even harder than usual that everything might be in satisfactory shape before his departure. He had visited Albany the week before his death, and on Thursday made an argument before a Senate Committee against the proposition of substituting iron poles for wooden ones in this city. His "talk" was admitted to be the ablest heard in Albany for many years, but the committee reported against him. He arrived home on Friday night much exhausted, but was at his office Saturday as usual, remaining until 6 o'clock, an hour and a half later than usual, and apparently in the best of

health and spirits. Sunday morning he arose at 6 o'clock, as was his custom, breakfasted, read the papers, and attended Easter services at the Church of the Holy Apostles, of which he was a vestryman. Mr. Milligan of Philadelphia, was his guest at dinner, after which both drove through Central Park, returning in time for tea, of which Mr. Orton partook with an appetite. About nine o'clock he was seized with nausea and went to bed. In a little while he complained of a numbness of his right side, which gradually developed into entire paralysis. He told his wife that he felt very sick. "My head, my head; it's paining me again," were his last words. In half an hour he had become unconscious. Mrs. Orton tried to arouse him, and finding her efforts in vain, grew alarmed and screamed for assistance. Her cries awoke the children, and the family physician was summoned. It was an hour before he arrived. He at once informed the family that there was little hope. Another doctor was sent for, however, and every appliance known to medical skill resorted to, but without avail. Mr. Orton never recovered consciousness, but passed away quietly and painlessly at six o'clock Monday morning. He breathed very heavily, and apparently died from strangulation or paralysis of the nerves of respiration. Dr. Norvin Green, Vice-President of the Western Union Telegraph Company, and Col.

Geneva, became clerk in the store, and subsequently partner.

In 1852 he took charge of a branch at Buffalo, and in 1856 the firm, Miller, Orton & Co., opened another house in Park Place, New York, with Mr. Orton in charge. This was not a success, the firm being forced into bankruptcy during the troubles of 1857. Mr. Orton, it is but just to say, has since paid all claims against his name arising out of this failure. Afterward he became managing clerk for J. G. Gregory & Co., booksellers, and was subsequently appointed Collector of Internal Revenue for the Sixth District of New York, and, in 1865, Commissioner of Inland Revenue at Washington. Here the work was very laborious and the pay only \$4,500. In October of that year the United States Telegraph Company needing a president Colonel James McKaye being about to resign—offered Mr. Orton the position at a salary of \$10,000 a year. Secretary McCulloch, in accepting his resignation, said: "Our official intercourse has been short, but it has been exceedingly pleasant to me, and has been long enough to satisfy me of your great executive ability, your uprightness of character and your devotion to the Government. I can pay you no higher compliment than to say that you have filled one of the most laborious, trying, and responsible positions in the country, a position requiring

great patience, industry, promptness of decision, and nice discrimination, as well as a thorough acquaintance with the law, in a manner highly satisfactory to the country and the Secretary."

Mr. Orton's management of the United States Telegraph Company gave great concern to Mr. Jephtha H. Wade, President of the Western Union. A ruinous competition had been going on for some time between the two companies, and he proposed a union. This was effected April 1, 1866, when Mr. Orton was chosen Vice-President of the Western Union. At the subsequent election on July 10, 1867, Mr. Wade refused a nomination on account of ill health, and Mr. Orton was unanimously chosen to fill the vacancy. At this time there were only 37,380 miles of line, 75,686 miles of wire, and 2,250 offices. The last report showed a total of 76,955 miles of line, 194,323 miles of wire, and 7,500 offices, and since that time over 8,000 more miles of line have been added. As Mr. Orton insisted on personally overlooking the details of the entire business, an idea may be obtained from this of the vast and constantly growing increase of his labors, and of the tremendous tension which finally snapped the thread of his existence.

Mr. Orton insured his life heavily for the benefit of his children, having had an insurance in one company alone—the Northwestern Mutual Life—of \$20,000 and a total insurance of about \$60,000. His property is variously estimated at from \$150,000 to \$200,000.

He was a man of rare executive capacity. He thought as accurately as quickly. He made combinations rapidly. His mind was mathematical and logical. He was always decisive, but always courteous. He was fearless in

pronouncing and maintaining his convictions, and in politics and in business was a born foe to mere expediency or timid politics. To borrow a smile from the business which he loved best, his battery of nerves wore out because he neglected to keep it charged with a sufficiency of healthful fluid, and his periods of rest were not frequent enough. He wrote and spoke with facility and fluency, but never diffusely; indeed, his language seemed to be telegraphically compressed. In domestic and social life he was a lovable man, and whatever he may have been in a Board meeting or on 'Change, at home or with friends his nature was a yielding one.

A meeting of persons connected with the electric telegraph was held at San Francisco on the day of Mr. Orton's death, at which suitable resolutions of respect were adopted and telegraphed to the Board of Directors of the Western Union. The latter also held a meeting the following day, Tuesday, for a similar purpose. After passing proper resolutions the Board resolved to attend the funeral in a body. Dispatches of sympathy were read from D. O. Mills, President of the Bank of California; Gen. Anson Stager, Vice-President of the company at Chicago; John R. Duff, of



PRESIDENT WILLIAM ORTON, DIED APRIL 22, 1878.

Berden, a near neighbor, were informed, and hurrying to the house remained until after his death. Mrs. Orton and his eight children—four sons and four daughters—were at his bedside when he breathed his last.

Mr. Orton was born in Cuba, Alleghany County, New York, June 14, 1826, and was, therefore, not quite 52 years of age. His father was a school teacher on a meager salary, and unable to give him more than a rude and limited education. At 16 years of age he set out to seek his fortune. He first obtained the position of "printer's devil" in a printing office in Angelica, twenty miles from his native place. He next taught school in Ontario County, and saved enough money for a session at the Normal College. It is said that his examination before the State School Board in Albany was one of the best of that year's quota of teachers. Curiously enough his thesis was upon the magnetic telegraph. This he illustrated by a rude model, which is now one of the treasures of the Department of Education in Albany. Mr. Orton after graduation was assigned to a small school in Livingston County, where he remained for nearly seven years. He afterward attracted the attention of a book publisher of

Boston; Senator Conkling, Hon. Schuyler Colfax, Henry Weaver, General Manager of the Cable Company at London, and many others. Dr. Green was chosen to act in Mr. Orton's place during the pleasure of the Board. The election to fill the vacancy will not probably take place until October.

A meeting of operators and other Western Union employes was held in room 50 of the company's building on Wednesday afternoon to take suitable action in regard to Mr. Orton's death. A number of A. & P. employes were also present, and a delegation of messengers arrived soon after the meeting opened. General Superintendent J. C. Hinchman nominated Gen. Anson Stager, of Chicago, as chairman. The following Committee on Resolutions was appointed: Clarence Carey, J. D. Reid, D. R. Downer, A. B. Chandler, and E. W. Andrews. During their absence from the room eulogistic speeches were made by Messrs. George Walker, of Boston, J. W. Simonton, J. D. Reid, A. B. Chandler, Charles F. Wood, of Boston, and George D. Ward, of the same city. Much feeling was manifested, and many present were affected to tears. The committee reported a long series of resolutions, expressing the highest possible estimation of Mr. Orton's character, which were unanimously adopted.

The remains of Mr. Orton were consigned to their last resting place on Thursday. The church was densely crowded. Among those present were Peter Cooper, Wm. Cullen Bryant, W. H. Vanderbilt, Judge Davis, Gen. Fitz John Porter, Gen. Eckert, Supt. Clinch, J. W. Simonton, Frank Leslie, representatives of the Union League Club, Chamber of Commerce, directors of the several telegraph companies, and of the Elevated Railroad, and a host of others, as well as all the directors, officials, managers and chief operators of the Western Union and Atlantic and Pacific Companies within a day's journey from this city, and many from greater distances, and a delegation of the Western Union messenger boys in uniform.

The employes of the Company wore mourning badges on their left arm. The pall bearers were: Senator Roscoe Conkling, Col. Wm. Borden, ex-Mayor Vance, ex-Judge John K. Porter, ex-Congressman George Walker, Vice President of the Gold and Stock; ex-Judge O. H. Palmer, B. K. MacAlpine, formerly Vice President of the Western Union; John Steward, an ex-Director of the Company; Naval Officer A. B. Cornell, ex-Vice-President of the Company and now a Director; James H. Banker, a Director; Gen. E. S. Sanford, formerly President of the old American Telegraph Company and now Vice-President Adams Express Company; J. C. Hinchman, Superintendent of the Eastern Division of the Western Union; G. B. Prescott, electrician to the Company; R. H. Rochester, Treasurer of the Company; A. S. Brown, Superintendent of the First Division, and J. B. Van Every, Auditor of the Company.

The floral offerings were few, but very beautiful. An immense pillow of lilies, roses, camellias, and violets, with a crown of similar flowers rising on a stem entwined with snailax, the gift of the Philadelphia Western Union employes, was placed on the left of the casket. The other pieces were: A broken pillar of tube-roses and violets, from Dr. Norvin Green; an anchor of similar flowers, from Chas. F. Wood; a large cross of camellias, roses and pansies from Gen. Anson Stager; a smaller cross of pansies and snailax from Frank Work, and a pillow of camellias and tuberose, with the word "Rest" in violets, from J. C. Hinchman. The marble baptismal font was filled with lilies and roses, and a basket and two smaller vases of white flowers ornamented the communion table.

Rev. Mr. Benjamin, in an eloquent and touching address, spoke of his deceased friend as one who was noted for an exquisite tenderness toward little children—more than any man the speaker had ever seen except, perhaps, the late Charles Kingsley; as a man who, though deeply engaged in worldly work, never allowed the dust of political warfare or commercial competition to cloud his vision of the throne of God, and as one who not only endeavored to fill the sphere that God had given him in life, but also strove faithfully to labor for human progress. He spoke of Mr. Orton's sudden death as something to rejoice at, likening it to the fall of a soldier upon the field of battle, and said he had been fully prepared by a good life and an honest heart. In conclusion, Mr. Benjamin thanked God for such a noble example as Mr. Orton had given, and urged his hearers to imitate it.

The funeral procession went by the most direct route, in the pouring rain, to the Thirtieth Street depot of the New York Central Railroad, where a special train, consisting of the funeral car, "Wood-

lawn," and three drawing-room coaches, was in waiting. Tarrytown was reached about two o'clock. All the vehicles in the village, including a large omnibus, were impressed into the service, and the cortege wended its devious way over the hills, past the monument commemorating the spot where Major Andre was captured, across the bridge where the Headless Horseman stopped in his chase of Ichabod Crane, through the mud and downpour to the ancient Sleepy Hollow Cemetery, with its century-old stone single-roofed church, and its moss-covered grave-stones inscribed with the names of the original Dutch settlers.

The grave was filled and the floral offerings, which had been carried from the church, set on top. While these ceremonies were proceeding, the rain poured down harder than ever. The mourners and friends returned to the city on the special train, arriving at the Grand Central Depot at 4:15 P.M.

The March of Intellect—The Animated Battery.

It is only a few days ago that Mr. Thomas A. Edison walked into an editor's sanctum, deposited a common looking box on the table, wound it up, and bade it explain itself to the astonished editor. After leisurely finishing the concluding part of an old refrain, it (the box), saluted the editor with a good morning, inquired after his health, and the health of his family, and explained that it was a phonograph, a new instrument recently invented by Mr. Edison, and designed to reproduce the sound of a human voice by a series of vibrations previously recorded by indentations on a slip of tin-foil. It (the box) then volunteered to open itself, and explain to the wonder-stricken editor the mysteries of its own interior mechanism, and, after inquiring the time of day, it politely remarked, that it must be going. It was then carefully wrapped in a newspaper by Mr. Edison, and departed under that operator's arm. This invention, which a few months ago was unknown, is now in common use among us; particularly among a class of enterprising foreigners of a political turn of mind, who, from the nature of such labor as trundling a wheelbarrow, or carrying a hod full of mortar, find those plebeian pursuits incompatible with any extended conversation during business hours. It is now a common thing in most of our large cities to see wheelbarrows and hods rigged out with cheap Edison phonograph attachments which will keep their owners in political argument all day. Thus, by the latest telegraphic invention, such an unpoetical labor as a wheelbarrow or a hod lightens the daily labors of its possessor by talking to him constantly of the immense advantage of Bluestone's eight-hour scheme and summer vacation with pay, of voting the labor ticket twice at every election, and of investing a few dollars in the Fenian Skirmishing Fund. But it is the recent application of the phonograph to the telegraphic fraternity which most concerns us. This is the idea of a western official, and by its use badly written discharge papers for operators are no longer necessary, since the manager will present the retiring operator with a phonograph with the customary "character" already punched on the tin-foil in the interior. When its owner applies elsewhere for a situation, all he will have to do will be to wind up his little box, and let the superintendent hear what it has to say. If it grinds out in a sweet, loving, half feminine voice: "You are a first-class man—I weep at your departure—first-class—never see your like again—first class, sir—salary thirty dollars," the operator will at once be employed at a salary of twenty-five dollars. But if the phonograph should break out in furious tones with the well-known refrain, "Give me the shot-gun," the astute superintendent will at once perceive that the applicant formerly received the fabulous salary of seventy-five dollars, and that his parting interview with his last superintendent, who desired to replace him with a forty-dollar man, was not of a particularly harmonious character.

Such, then, is the rapid and onward March of Intellect, not to mention the latest grand triumph of executive ability and genius—the salary grade. The optograph, to transmit waves of plain and colored light, which will enable us to see by telegraph, is in a forward state of construction; and the Electrotherm for transmitting waves of heat, by which conscientious first class operators can freeze out a meddlesome chief operator, or make it literally red hot for a plug at the other end, has already been perfected in theory. But all these inventions are hollow mockeries compared with the "Telekephalop," recently invented by one of our most eminent

scientists. It is to be used in the shape of a new battery, and will enable us to use to better advantage the enormous wealth of official brains which is now being literally wasted on such drudgery as composing schemes for salary grab—that is, to say, salary grades—and the writing of ridiculous general orders.

The Telekephalop has been named from three Greek roots. Of course, it would have been more to the point to have called it at once "the animated battery," but inasmuch as to name any new telegraphic invention without the aid of Greek roots, or to demonstrate the simplest electrical problem without numerous algebraical signs, is contrary to all the rules of our leading electricians, it has been named accordingly from three Greek roots. These roots are, as I was about to say before, *τηλε* (tele), "at a distance," *εγκεφαλος* (egkephalos), "brains," and *ιαπτο* (iapo), "to send forth." It is designed, as its name obviously implies, to distribute brains throughout the service by wire from a single central point in waves of cerebration, just as waves of sound are now transmitted by the telephone. Nobody has ever doubted even for an instant the appalling scarcity of brains in our profession, and as the animated battery is what may be roughly defined as a transmutation of intellect, and as it will afford better employment for officials than concocting absurd general orders, it will be hailed with much delight by the profession at large.

This wonderful battery will be located in New York, and will be composed of a number of brilliant men, each remarkable for the special development of some particular "bump," thus forming a cerebro-electric pile of from one to one hundred elements, and yielding an enormous supply of subtle, spiritual forces, to which each illustrious individual will contribute the vast wealth of his peculiar qualifications. The number of men requisite for this great central battery of intellectual forces will depend entirely upon the resistance of ignorance and inexperience on the lines worked from it. Thus, to work a wire to Philadelphia, Buffalo, or Boston, two men would doubtless yield sufficient force, while to drive an ordinary amount of common sense into the manager's office at Chicago, for instance, a battery force of all the way from five hundred to two thousand solid men would probably be required.

The important discovery is based on the well known theory that a bad wire, even when manned by poor operators, works faster by some mysterious induction when Eitemiller stands near it; and also on the hypothesis, first discovered by the New York Wire Club, that if a man of the fiery sensibilities of "Bluestone," of Philadelphia, comes in contact with a creature possessing the stony patience and meek philosophy of the lachrymose "Biographer," of Chicago, a powerful electrical action is at once induced between them. M. Gintl has further demonstrated that a good battery can be formed by inserting two small ribbons of metal—one of copper and the other of zinc—in a common potato, the vegetable substance in the "murphy" furnishing a strong current of electricity. Now, in view of the enormous capacity for brain-work displayed in the invention of the salary grab—I mean the salary grade—the theory has been deduced by an exceptionally tiresome scientist that certain human heads, owing to their resemblance to potatoes, cabbages, squashes, tomatoes, and other vegetables, might be utilized as a battery with even greater effect than the common *pomme de terre*; and that a live voltaic combination might thus be produced which would yield a better positive element than any yet produced, and be at the same time inoxydisable, insoluble, and fully equal to the required standard of electrical conductivity.

Hitherto, the great want in the matter of perfect batteries has been "constancy," and, at the same time, of a very weak "resistance" as compared with the resistance of the lines supplied from it. Now, the "constancy" with which petty officials can find nothing in particular to do, renders discussion of the merits of the animated battery in that respect absolutely absurd. With regard to its low "resistance," that is still easier to prove. Mr. Culley, with a total disregard of truth, has deluded most of our scientists into the silly belief that the resistance of the average human body is 1,700 ohms, or equal, as he unblushingly asserts in his book, to 1,300 miles of wire. If this preposterous statement were true, it would be very evident that the resistance of a battery of ex-officials would be too great to work even a local circuit. But the reckless statement has been entirely refuted—first, by one of our most distinguished native *savants*, Mr. Ashley, who being offered the editorial chair of the W. U. tariff circular (although he was then the champion and

editor of one of the operators' papers), offered no appreciable "resistance" whatever. Since then, the total lack of "resistance" on the part of a chief operator when presented by his quaking subordinates with a testimonial watch and chain, has been pointed out; and the entire innocence of "resistance" with which Bluestone would greet four months leave of absence "with pay," renders Mr. Culley's theory that the resistance of the human body is 1,700 ohms absolutely a matter of silent scorn and contempt. It will thus be seen, on the contrary, that any number of men could easily be found, under proper inducements, to form an animated cabbage-head battery whose joint resistance, at the most, would not be over ten ohms. Nay, the invention has actually been tested satisfactorily, and eminent students in thermotics, unconscious cerebration, and the polarization of light and heat, all admit the efficacy of a battery where the profound inventor of the salary grade scheme—whenever he is—Senator Stanley Matthews, ex-doorkeepers Fitzhugh and Polk, Private Secretary William K. Rogers, Corporal Tanner, ex-manager Julian Soule, and other otherwise useless mortals were stood in lines answering to the present system of layers of platinum and zinc. That which answers to the positive pole in the battery now in use could be supplemented by that distinguished Chicago eulogist, "Biographer," while the holiday-loving "Bluestone" might ably represent the negative pole, though the theory of M. Gassiot that electricity cannot pass through a perfect vacuum might possibly debar from the experiment all their heat—that is to say, what they represent to the profession and the general public as their heads. Some electricians may doubt their paramagnetic or diamagnetic qualities, but it cannot be denied that we would thus have a battery of great "constancy," and one entirely free from "polarization." Moreover, it would be adjustable at pleasure, since chief operators are so plentiful in Chicago that New York could import them by the score as required, and switch them into a weak circuit, or shunt them off from a strong one, as circumstances might demand. Thus, if Washington office complained that the "intensity" was too great on No. 41, the New York chief could switch out the weeping "Biographer's" balderdash, while in answer to Pittsburgh's facetious office-message to give us some taffy on No. 20," he could turn the switch connected with the office of *The Journal of the Telegraph*, and so permit the Will-o'-the-wisp influence of a two column editorial on the salary grade to predominate on No. 20.

There is still one objection to be overcome. In recent experiments it was pointed out by some observant experts that, owing to the disposition of telegraphic petty officials to be out "hunting up a customer," when most needed in the office, there would be a serious lack of "energy" in the new battery. It was proposed to remedy this defect by introducing to the battery room a mule well accomplished in the difficult art of kicking simultaneously with all its legs; and when, as the astute electricians reasoned, that festive animal struck out fore and aft, port and starboard, simultaneously and collectively with all its feet, an extraordinary amount of "energy" would be developed in the animated battery. This plan proved, as Mr. Varley had predicted, to have many serious drawbacks, and here now is the point where the March of Intellect has been arrested. More "energy" was obtained from the ex-officials by stirring up the mule with an extra long fishing rod, but it neutralized itself by inducing, as Varley had pointed out beforehand, a rapid "local demoralization," owing to the unexpected alacrity with which the officials representing the zines, in proud defiance of all well established electrical principles, climbed out of the fourth story window, and glided down the lightning-rod; while the animated platinas, with a dastardly disregard of any compromise with the mule, rapidly ascended the chimneys and ventilation flues, leaving finally no battery power but the conscientious mule. Various plans for counteracting this "local demoralization" are now under consideration, some of which include locking the battery room door on the outside, nailing up the windows and chimneys, muffling the mule's feet in boxing gloves, etc., all of which plans, have, however, been unanimously voted down by the animated battery itself.

It would be a pity if we should lose faith now in the ultimate perfection of this beautiful, useful, and animated machine, and if a Mr. Smith should step forward and suggest a remedy for this "local demoralization," we would no more object to his calling it the "Smith battery" forever afterward, than we did to a Mr. Jones cobbling at Prescott and Edison's quadruplex, and smiling blandly when his

flatterers called it "the Jones quad." Anything which will perfect the Telekephalap will not only afford our science another new and excelent battery, but will, by its use, provide occupation for numerous officials who would otherwise direct their efforts toward inventing something new and more disastrous in the nefarious science of salary "grading." It behooves us, therefore, to perfect this latest invention, not only in the interests of science, but to protect ourselves by directing their devastating intellects into the channels where they will do the most good. I have an abiding faith, however, in the unobstructed March of Intellect in our profession, and effete Europe—where they know nothing of grading salaries "so as to result in a saving to the company"—will soon gaze with astonishment on another great American invention—the ANIMATED BATTERY.

WERNER.

Dot Earophone.

Noddings but droobles gomes py a Chermans. I vas py yesterday in der delegraff office, und vile I vash looking roundt at der kromos on der vall, a men sdeps op py me, und oxglamet, "Halo Tuchy! whose your peezness here? Someding you don't vant, eh?" I oxblainet dot I used der vas a oberader mineself vonce, unt of he dont got some dischection, I vill lofe to look py some ouf der improfelements vot got happened ladelly. "Oh yaw, dot's goot," he repliet. "all ride, come mit me, und I vill show you der telefone," und he vas ferry much kind mit me, und showed me all der vonders py dot crate infention vot Misder Edison whittled owet mit a chackknife—so dot oberader dolt me. Vaell, afder I seen all opowet der telefone, und ve vas going drough der pattery rooms, dot vailler sopped him, und onquired of I had me efer seen der earophone; "Vot's dot?" I onquired. "Oh," says him, "dot's der latest owet;" den he bicks him op a beak prass horn from the floor mitowet some keys on it, und says he, "now, Tuchy, dot vas a areograph, und of you vill like to vittness der vorkings py dis vunderful insdromendts, it vill pen necessary dot ve shall verst make zome arrangements. Dis insdroments vas used for sheaking mit crate distances, making sheeches in Poston to a audience vot ish mit Noo Yorkg, und dot forth. You vill hafe to bractice a leedle virst, let me hear you sheak in it vonce." So I raised der pugle to mine lips, und spoke: "Louder!" says dot oberader, so I yells louder dot time, "Dot's goot. Now, Tutchy, you vill go over mit der goort howess, und get bermisison for dot shanitor to ko op on dot roof, und bractice mit dot earophone, und in dot meantime, I vill go me on top mit der roof py dis office mit a bisdle, und ven you ket mit der kourt howess (dots dwo miles away) you vill hollers vire! und so soon ash I shall hear you, I vill fire me off dot bisdle." All riot, I dolt him, unt I vash ferry much excitet abowet it. Vell, I kot me no droobles mit der goort howess, und der shanitor dolt me shay so long ash I vant. So soon ash I kot me mit der roof I puts der boogle to mine mouth, und hollers mit all my might, vire! But I hears me no bisdle, so I yells fire! again, so louder as pefore, sdill I dont hears no bisdle, den I got me mat, und I yells dwoice so loudt ash pefore vire! vire! vire! Shust den I hears me vone awful beak noices. Der visles gommenced der plow, der bells pegan to ring, horses und vagnos vas running away. Dot racket und konfusion I dont shall nefer forget. Bretty soon I vash me surrounded py more ash two dousant beeples, und I puillt up my mindt dot folks vas ketting oxsiat apowet dot earcaarf, und I vas fraid it wouldn't be a success; so I yells me louder ash louder, vire! vire! vire! vire! Shust den I hearet a beak noices py der sdairs, und I looked me down, und dore vas eight or ten mans coming op der sdairs. Zer virst one had some prass putons mit his koadt, undt so soon ash he kets mit der roof he snatches me py der kollars, und oxglamet: "skoundre! lunadix! tempool! who you mean py dose alarm vot ish valse. I vill deach you some petter ash dot. Kome mit me!" I tried to oxblain but der more ash I say, der more he kalls me earophone fool. Den he said he: "baet two of one," dot I sdole dot fire drumpet. Vaell, ven he kot me down dot sdairs he took me mit der shail, und puts me in vone shacket vot is sdraight, und keebet me deder dilt dey dink I dont vas grazy some more, und dots der reason, misder edider, vy you dont hear py me quicker pefore.

YOSEF.

APRIL 18, 1878.]

The Edison Quadruplex Suits.

It will be remembered that a suit was brought about a year ago by the A. & P. Telegraph Company, before Judge Sanford, to restrain the Western Union from using the Edison quadruplex. The case was before the courts for several months, and was fully reported at the time in *THE OPERATOR*. Another suit by the Western Union against George Harrington, Thomas A. Edison, the Atlantic and Pacific Telegraph Company, and others, which was begun before that brought by the A. & P., was before Judge Sedgwick in the Supreme Court last Monday—the day Mr. Orton died—on a demurrer to the complaint. The suit is to establish the title of the Western Union Company to Mr. Edison's inventions in quadruplex telegraphy, and to enjoin Harrington and Edison from carrying on certain prior suits in equity in the Federal courts. These suits are for the infringement of a patent obtained by Harrington and Edison for one of those inventions, and also to establish their title to all of them, as against the claims of the Western Union Company, under certain agreements alleged to have been made by the Western Union Company with Edison, and with him and Prescott, the company's electrician.

The present suit involves almost the same issues. The complaint claims that Edison in 1873 agreed to sell to the Western Union Company the inventions he might make for a just price, to be agreed upon or determined by arbitration; that Edison after making the inventions assigned them with the consent of the Western Union Company to himself and Prescott in August, 1874, and that afterward, in December, 1874, they made an offer in writing, unsigned, to sell the inventions to the Western Union Company for a certain sum to be then paid, and a royalty of \$166 a year for each circuit created; that the offer was accepted, and part payment made in advance. Upon the demurrer, last Monday, Mr. W. A. Butler argued, first, that the agreement made in 1873 was insufficient in law to create any title to the inventions; at most the Western Union Company could only maintain an action against Edison for damages for refusing to name arbitrators if they had requested him to do so, and no such request was alleged; second, that the agreement of December, 1874, is invalid under the Statute of Frauds, it being an agreement not to be performed within a year, and the payment in advance on account not being a part payment of the purchase price of the property sold by the contract sought to be enforced; third, that the action cannot be maintained because the complaint shows that the suits in the Federal courts were brought before this action was begun, and that all the matters sought to be litigated in this action are embraced in those suits. After hearing Mr. Soren in opposition, Judge Sedgwick reserved his decision.

Grappling for a Lost Cable.

The "Great Eastern" was fitted out with apparatus, which may be likened to an enormous fishing-hook and line, and was sent to the spot where the treasure had been lost. The line was of hemp interwoven with wire. Twice the cable was seized and brought almost to the surface. Twice it slipped from the disappointed fishermen, but the third time it was secured. It was then united with the cable on board, which was "paid out" until the great steamer again reached Newfoundland, and a second telegraph-wire united the two continents.

The scene on board as the black line appeared above water was exciting beyond description. It was first taken to the testing-room, and a signal intended for Valencia was sent over it, to prove whether or not it was perfect throughout its whole length. If it had proved to be imperfect, all the labor spent upon it would have been lost. The electricians waited breathlessly for an answer. The operator in the signal-house at Valencia was drowsy when their message came, and disbelieved his ears. Many disinterested people, and even some of the promoters of the cable, did not think it possible to recover a wire that had sunk in thousands of fathoms of water. But the operator in the little station connected with the shore-end of the cable of 1865 suddenly found himself in communication with a vessel situated in the middle of the Atlantic. The delay aggravated the anxious watchers on the ship, and a second signal was sent. How astonished that simple-minded Irish telegraph-operator was! Five minutes passed, and then the answer came. The chief electrician gave a loud cheer, which was repeated by every man on board, from the captain down to his servant.—*William H. Ritchie in St. Nicholas.*

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

W. J. JOHNSTON, - - - Publisher.

May 1st, 1878.

WERNER discourses in this issue in his usual graceful style on the Telekephalap or animated battery.

THE Western Union building in this city is heavily draped in mourning out of respect to the memory of President Orton.

THE prospectus has been issued of the *Southern Operator*, no relation of ours, to be published at Bolivar, Hardeman County, Tenn.

In sending money procure a Post Office order if possible, or register your letter. Where small amounts cannot be sent in bills or currency, three cent stamps will do.

It is said that the original projectors of the defunct Automatic Telegraph Company are making strenuous efforts to resurrect that organization. How far they have so far succeeded we have not heard.

MR. ORTON died of overwork, and his death should be a warning to operators not to overtask their strength either by "working extra," or neglecting the laws of nature in regard to sleep, air, exercise, etc.

In subscribing for THE OPERATOR a considerable saving can be made by ordering one or more books at same time. See low prices in another column, at which both will be mailed to the same or separate addresses.

THERE is nothing new to report in reference to the Continental Telegraph Company, except that the Philadelphia line is being rapidly pushed forward, and that everything, the officers say, is working satisfactorily. After offices have been opened in this city and Philadelphia, the line will at once be extended to Baltimore.

THE annual meeting of the Atlantic and Pacific Telegraph Company, which was to have been held April 25th, was postponed until May 8, on account of the death of Mr. Orton. A report will appear in the next issue of THE OPERATOR. It is probable that the Western Union will secure a majority of the new directors at the forthcoming election, May 8th.

THE suit in which Elias C. Benedict seeks to set aside the pooling arrangement between the Western Union and Atlantic and Pacific Telegraph Companies, as already reported in THE OPERATOR, was argued before Judge Donohue, in the Supreme Court last week, on a motion to strike out certain portions of the answer of the last-named company, and also to compel the latter to elect which of two defenses they will rely on. Decision was reserved.

The Late President Orton.

It is somewhat startling to realize that President William Orton, who, when we issued the last number of THE OPERATOR, was the active head of the vast army of telegraphers throughout this country, and who on Easter Sunday attended Divine service apparently in his usual health, should to-day occupy a little plot six feet by three or four in the Cemetery of Sleepy Hollow, at Tarrytown. It seems a pity that a man who was so general a favorite with all who knew him; whose brain so wisely planned and successfully carried out so many important undertakings; whose words of wisdom and eloquence were listened to with so much respectful attention by Senate and Assembly Committees; whose thousands of employes looked up to him so proudly and with so much admiration; and whose equal in all respects it will be impossible ever again to find, should have to be consigned to the oblivion of the grave, there to moulder away in silence, until his body shall have been absorbed into the mother earth.

Mr. Orton was one of the finest executive officers in this country. His faculty of grasping details was wonderful. Although his knowledge of telegraphic matters when he joined the business was scarcely worth speaking of, at the time he died there was not a telegraph instrument or apparatus of any description in use, no matter how simple or how complex, with which he was not perfectly familiar, nor a mechanical contrivance in the building which he did not thoroughly understand. He was intimately conversant with the quadruplex system, and never tired of studying it. His office hours were from 9.30 until 4.30, and, after remaining steadily at his post all day, dictating to a stenographer, he would frequently take home a large budget of papers, read them, after dinner, and dictate replies next morning without again referring to them. In fact, his whole mind seemed to be absorbed in Western Union. In his office, on the street, at home, or during vacation, it was always in his thoughts. He insisted upon personal supervision of every detail connected with the enormous business of the company, and left nothing to superintendents or subordinates that he could do himself. While this may have been comparatively easy at the commencement of his official career, the extraordinary growth of the company since has rendered the task a truly herculean one.

The history of the company since Mr. Orton took charge of it has been one of yearly increase in facilities, with which there has been some but not a proportionate increase in net receipts. In 1866 he found the company with 37,380 miles of line, and 2,250 offices. The next year there are 46,270 miles of line, 2,565 offices, and profits amounting to \$2,624,919.73. Since that time the Pacific and Atlantic, the Southern and Atlantic, and the Gold and Stock Telegraph companies have been consolidated with the Western Union. The International Ocean Cable Co. to Cuba was bought, and the Atlantic and Pacific and Central Pacific lines have been leased and brought under one control, so that now the company controls 202,000 miles of line, has over 7,500 offices, and returned \$3,140,127.67 as profits for 1877.

Mr. Orton was a warm friend of, and took great pride in, the operators and other employes of the company. On the evening of his death, a prominent official said in conversation that the deceased

president had never in his life suggested, but always vigorously opposed, a reduction of salaries. "He never," added the official, "asked me to reduce an employe's salary, but would always say: 'Just do the best you can.'" It is known, also, that Mr. Orton opposed the obnoxious "sliding scale" until he became convinced that the measure would be carried in spite of him. And on that occasion, when he discovered that the salaries of the executive officers were not mentioned in the proposed reductions, he himself reduced them 25 per cent., and his own from \$25,000 to \$19,000. "No man shall look me in the face and ask why I took a hundred from him and did not touch my thousands," he said.

He also disapproved of the so-called "grading," and the resolution was finally passed during his absence in Cuba. Generosity was a marked feature of his character. No worthy charity ever appealed to him in vain. He was ever ready to assist friends or strangers in distress. No matter how low or degraded, any man whom he had once known in better days could get audience as quickly as the highest dignitary in the land.

The daily papers of this city devoted from one and a half to three columns to the announcement of Mr. Orton's death and a sketch of his life, and most of them also added highly eulogistic editorial comments. Major Bundy, of the *Evening Mail*, a personal friend of the deceased, says: "The sad intelligence will cause sincere mourning wherever the wires of the Western Union telegraph carry it. For, in one sense, that corporation had a soul, and that soul was William Orton. Its most distant employes felt and knew that there was a man in command. They looked to him to defend it against all attacks, and never in vain. They looked to him for wisdom and justice, and never were disappointed. We have known him thoroughly. If there was a weak side, we never found it. We did find him a man with the pluck of a soldier, the honor of a knight, the breadth of a statesman, the commanding genius of a general, and the executive characteristics that are not found in any other man whom we know. His ways were clean and noble. His aims were high and honorable. His actual performances were great."

The *Herald* says, editorially: "He was universally respected for his integrity, candor, good sense, foresight, and business energy. For several years before his sudden and lamented death, Mr. Orton was universally recognized as one of the ablest and most skillful men of affairs in a community which abounds with that kind of talent. No man was more faithful, considerate, and amiable in all private and domestic relations, and he is most sincerely and deeply mourned by those who knew him best."

The *Times* adds: "His career has been that of one who attained a prominent position by honest and well-directed effort, and who kept it by conscientious and single-minded devotion to the interests intrusted to his care. * * * A man whose industry was equaled by his penetration, and whose comprehensive grasp of details was made vital by a rare and discriminating faculty of organization."

Mr. Orton's domestic relations were particularly happy. To the outside world he was known chiefly as a shrewd, energetic, hard-headed business man; but in social circles his incisive manner was laid aside, and he overflowed with reminiscence and anecdote. The warmest affection

existed between himself and children. His oldest daughter is twenty-four years of age; his eldest son, William Orton, Jr., is twenty-one, and holds a position in the Western Union executive offices.

We publish on our first reading page an excellent likeness of the deceased. In person Mr. Orton was tall, with a commanding figure and a striking face. He was dark, with strongly marked features, and his manner conveyed an impression of great firmness. Of late he had gained in flesh, but it was remarked by many that his face had lost its look of health, and betrayed habitually an expression of weariness.

Dr. Norvin Green, first Vice President, will temporarily perform the duties of the President's office. The vacancy will probably not be permanently filled until the annual meeting in October. Several candidates are already mentioned in connection with the presidency. If Dr. Green's administration is satisfactory, he undoubtedly stands a good chance. The *pro tem* President is a man of about Mr. Orton's age, with a sharp, nervous, penetrating glance, and as inveterate a smoker as ex-President Grant. He is rarely seen without a cigar in his mouth, is a shrewd, practical, energetic man of business, a hard worker, and has had much telegraphic experience. General Anson Stager of Chicago is also spoken of as a probable candidate. The General has risen from the ranks, is popular with both company and employees, and would unquestionably fill the position with credit. The name of General T. T. Eckert, of the A. & P. is also mentioned. General Eckert is energetic enough, and in many respects would be a suitable man for the place, but his chances are not large. Ex-Gov. E. D. Morgan is also spoken of. Mr. Morgan is an old Western Union director, and he it was who last Wednesday, for himself and others, purchased the Erie Railway for six million dollars, and immediately drew his personal check for \$720,000. He is wealthy, has held many important positions, but is not likely at his time of life to accept the presidency of a telegraph company. J. W. Simonton, of the Associated Press, is also suggested as a good man for the position. But Mr. Simonton is also wealthy, has already probably as much on hand as he cares to attend to, and we do not think would accept it. We know he has been offered a vice-Presidency, and refused. Even Hamilton McK. Twombly, W. H. Vanderbilt's son-in-law, whose visit to THE OPERATOR office a few weeks ago is familiar to our readers, is mentioned in this connection. Mr. Twombly is young in years and younger in experience, and we hardly think there is much immediate danger of the cautious stockholders, looking for the fullest return from their investment, intrusting so important an enterprise to his keeping. His father-in-law, owning a majority of the stock, will be able, however, to put in whom he pleases, which is about the only argument in Mr. Twombly's favor. He now has a desk in the Executive office, is evidently training for the position, and would doubtless have been at once appointed could his season of probation have been longer. Whoever is called to fill the important position, we can only hope that he will strive, as between the stockholders of the company on the one hand, and the employees on the other, to follow in the footsteps of the deceased president, and deserve, when his work is done, the same high eulogies that are justly being accorded to the memory of Mr. Orton.

A Word to Non-Subscribers.

We send a number of extra copies of this edition as specimens to offices where we have no subscribers. Please examine the paper thoroughly and if you like it, send us your subscription. THE OPERATOR is devoted solely to the interests of the telegraphic fraternity; is fearless and outspoken in defending their rights by whomsoever attacked, and is thoroughly well established, and perfectly independent. The late President Orton paid his \$1.25 a year as subscription, the same as the humblest operator. Being the only paper in the country which dares stand up for the rights of telegraphers, and the only one in which they can make known their grievances or compare views, every operator should consider it a matter of honor to subscribe for and help sustain a paper which is so valuable a friend to the telegraphic profession. Some think that it is not necessary to subscribe for THE OPERATOR because they receive the *Journal* free. This is a great mistake. The *Journal* is devoted wholly to the interests of the Western Union Telegraph Company, and you want a paper devoted to your own interests. This THE OPERATOR is, besides which you will see from the present issue, that the papers bear no comparison in the matter of their contents. It is but rare that the same article is published in both papers. THE OPERATOR has a large corps of contributors; the generality of its articles are original, and all of them are precisely what telegraphers want to read. Were it not for the advertisements the subscription price charged would not pay for the bare cost of production. Try the paper for a year, or at least for the remainder of the present year. You will not regret it. By ordering one or more books in connection with the paper, a considerable reduction is made. See pages 11 and 15.

After the 1st of July next the French telegraph lines are to make a uniform rate. The charge for a message of ten words or less will be about nine cents, and the message can be sent to any part of France for the one rate.

In accordance with the request of the Chicago telegraphers, we shall be happy to receive and forward subscriptions to the fund for erecting a suitable tablet to the memory of J. J. Powers, who recently died in that city. See Chicago Notes.

A VERY ludicrous and exceedingly stupid bull was made in the report of President Orton's death telegraphed to a Baltimore paper. Speaking of Vice-President Norvin Green, the paper was made to call him, "Norvin Green, visiting resident of the Western Union!"

THE number of new telegraph companies starting is legion. The Central Union Telegraph Company has been organized at Oswego, with a capital stock of \$200,000, and it will enter at once upon the construction of the first division, from that place to Syracuse, a distance of 38 miles.

MR. J. A. CLIPPINGER, author of "The Pedagogue of Widow's Gulch," has written another book on the adventures of a railroad telegraph operator, which will be published by Mr. Johnston early next fall. The book will be about two hundred pages, somewhat larger size than "Oakum Pickings," probably bound in paper, and sold at 75 cents.

READERS OF THE OPERATOR should bear in mind that we are always happy to purchase for them anything that they may desire from New York, whether in the line of telegraphic or electrical goods or otherwise. Any telegraphic instrument or apparatus advertised in these columns, or manufactured in this country, will be sent on receipt of very lowest manufacturers' prices. Books, newspapers, or magazines on any subject published in New York, Boston, Philadelphia, or Chicago, will be sent prepaid by mail on receipt of publisher's prices. We will thank our readers if in future they will send all their orders, small or great, to us. We will guarantee them satisfaction.

MESSRS. PATRICK AND CARTER of Philadelphia, have just issued a new and enlarged catalogue and price list of telegraphic and electrical instruments, and apparatus manufactured by them. It is handsomely printed on tinted paper, and contains much of interest to telegraphers. Send for a copy, which will be mailed free.

MR. ORTON's death was very sudden. Apparently in excellent health, and in the prime of a vigorous manhood, he died without being allowed scarcely a moment's preparation for the great journey upon which he was about to enter. Fortunately for himself, however, he was a sincere Christian. His death forcibly conveys the injunction to every telegrapher: "be ye also ready."

SUBSCRIBERS receiving more than one copy of this issue, will please use the extras in getting up clubs for us. Those who do not, will confer a favor by sending their own copy, after reading it, to some non-subscriber, with a request to subscribe. Every reader can get at least one new subscriber, and see what a help that would be in increasing not only the circulation, but the influence and usefulness of the paper. Please try it.

DR. GEO. M. BEARD, of 41 West Twenty-ninth Street, New York, is endeavoring to get at the facts relating to the symptoms and history of the disease known as "writers' cramp." He has issued a circular of inquiry, and requests telegraphers and other sufferers to send for a copy, and reply to the questions therein contained. Address as above.

WE would draw particular attention to the advertisements of "Lightning Flashes" and "Oakum Pickings" in this issue. These are the first books published with a view of giving telegraphy a literature of its own, and the sales have already been most encouraging. One week after "Oakum Pickings" was issued, the demand for copies was so great that a second edition had to be got out. A third has now been issued in paper covers at the remarkably low price of 75 cents. The sales of "Lightning Flashes" have also been very large, and without exception the book gives unbounded satisfaction, and elicits the warmest praise. Three copies of the latter will be mailed prepaid on receipt of \$3.75. As the book is equally interesting to outsiders, try to get two of your friends to join you, and then send for three copies at this extremely low price.

THE old Park Hotel at Beckman and Nassau Streets, in this city, is to be torn down to make room for a handsome building for business purposes. Prof. S. F. B. Morse occupied rooms in this hotel while he was experimenting with the electric telegraph, and it was there that he pursued his studies of the method of Daguerre in the making of "sun pictures."

"YOSER" to-day relates in his inimitable Dutch style his unfortunate experience with the ear-aphone, which none should miss reading. Mr. Watts is at present in Jackson, Michigan, waiting for something to turn up. Since returning from California he worked a short time in Detroit, but resigned on account of ill health, and went into other business. The latter not paying, he is again ready to enter the telegraphic field greatly invigorated from long relaxation. We wish Mr. Watts all manner of success.

Mr. ORTON's career has many useful lessons in it for telegraphers. From a "printer's devil" in a little country newspaper office, he resolutely worked his way up, aided only by hard work and his own indomitable will, until at his death he held one of the most important positions in this country. The man wields a mighty influence who directs the destinies of so powerful a corporation as the Western Union Telegraph Company, and in addition controls, in great measure, the newspaper press of America. We cannot all be Ortons, or gain as national a reputation; but in our own particular sphere we may exert as much influence for good, and among our own circle of acquaintances leave behind us as bright a name.

WE have not troubled our readers much this winter with appeals about getting up clubs for THE OPERATOR. This issue, however, we send out a large number of specimen copies, and feel that we are justified in asking them to come in now, and lend us a little hearty co-operation. Let every one of them do what he can at this time, and gladden our heart by a generous influx of new subscribers. It spurs one up to great exertions when he knows that his work is being appreciated, and that his number of readers is increasing. THE OPERATOR has hitherto certainly improved in full proportion to the increase in its subscription list. Let's have a simultaneous effort all over the country to add as many new names to the list as each can. There is not a reader but can obtain at least one new subscriber for us. Try.

ONE of the most popular men in this country at the present time is Thomas A. Edison, of quadruplex, telephone, and phonograph fame. The New York Sun not long ago called him the Napoleon of inventors, the Buffalo Express speaks of him as the world's favorite son, and newspapers generally vie with each other in doing him honor. We expected to have published in this issue a number of highly interesting reminiscences of Mr. Edison's remarkable career as a newsboy, amateur newspaper editor and publisher, telegraph operator and prolific inventor, from the pen of Mr. Geo. H. Bliss, of Chicago. We are so crowded with matter, however, as to be compelled to let it go over until next issue. Mr. Edison is only thirty-one years of age, and is the author of more than one hundred inventions. He has been described by the U. S. Patent Commissioner as the young man who kept the path to the Patent Office "hot with his footsteps."

The New Fire Alarm Telegraph Bureau.

The New York Fire Department is acknowledged to be the best, most efficient, and most complete of any in the world. That much of its efficiency is due to the use of the telegraph no one will question. Considerable changes and improvements have recently been made in the telegraph bureau, and several new instruments and apparatus added, so that to a visitor the place now presents an imposing appearance.

The operators' room is situated upon a raised platform in the front part of the building, and is enclosed by a cabinet of solid mahogany, carved in the most elaborate manner, the whole space occupied within the enclosure being twenty feet square. The lines from the various poles are brought through an iron frame work into the loft of the building on which the lightning arresters are situated. From that point they are carried into the wood-work in such a manner as to be entirely hidden from view.

The switch-board, which is of marbleized slate of the most beautiful design, is located on the southern side of the operating room. Here are also situated the galvanometers, which indicate at all times the condition of each wire and battery. From here the wires diverge toward the box circuits, being carried to the opposite side of the room, where the apparatus is placed on which the fire alarms are received.

By means of fire-stops all signals from the street boxes are transmitted to the company quarters direct, and without the loss of a second's time. The signals are received on the small gong in company quarters, several seconds in advance of the signal on the large gong, on account of the size of the latter.

All the machinery used for sending and receiving alarms, signals, and messages is duplicated throughout, so that the failure of any piece of this great mechanism will not affect or delay the immediate reception or transmission of alarms. The annunciator numbers after being dropped down from any cause are immediately restored to their places by electricity. The office is also provided with the most finished and improved apparatus for testing the wires, and calculating closely the location of any interruption or trouble which may exist on any of the circuits. There is also an instrument for testing automatically the alarm wires and making a register of such test once in every ten minutes, by means of a register provided for the purpose, and likewise showing the condition of these wires on a separate annunciator. There are sixty circuits, comprising forty-one box circuits, over which alarms are received; ten gong circuits, over which alarms are transmitted to the company quarters; and three dial circuits, and two tower circuits. An inspection of this beautiful piece of complicated and useful apparatus will well repay the visitor to the headquarters of the Fire Department.

A Would-be Telegrapher.

The following letter has been forwarded to us, and is so rich, rare, and racy that we publish it verbatim for the benefit of our readers. It is addressed "To any telegraph office, Reading, Pennsylvania, I N H A S T E," and reads:

DEAR SIR: I thought I will write to you to let you know that I would like to have some kind of a business, and I thought perhaps you could learn me, and give me some work if I learned telegraphing. Please learn me, then if I learned it, give me some work.

I am fifteen years old. Let me know what you would want to learn me, and what you will give me if I have learned it, if you do not want to take me, please and talk with some other telegrapher that will take me, and give me the address. I want to come down there then and learn it. Look on other side. [Then follows the address, and the anxious injunction to please write soon.]

OUR PHONOGRAPH ABROAD.—The phonograph has carried Paris by storm. At first the story was actually spread abroad that the machine was simply a mystification, and that the person who exhibited the phonograph was merely a clever ventriloquist and imitator of other peoples' voices. No mind but that of a Paris cockney could have conceived of such an idea as that. As soon as the Academy of Sciences had testified to the genuineness of the invention the town went wild about it, and Edison has had such advertising as in his wildest dreams he could not have expected.

Themes for the Thoughtful.

We should use a book as a bee does a flower.

Death comes equally to us all, and makes us all equal when he comes.

Woman's silence, although it is less frequent, signifies much more than man's.

One companion, one look, one habit, may affect the whole life and character.

He submits to be seen through a microscope who suffers himself to be caught in a passion.

Talents are best matured in solitude; character is best formed in the stormy billows of the world.

Cheerfulness makes the mind clear, gives tone to thought, and adds grace and beauty to the countenance.

It takes one less time to get over one's own misfortune than to be reconciled to a neighbor's good fortune.

With love the heart becomes a fair and fertile garden, glowing with sunshine and warm hues, and exhaling sweet odors.

We should feel sorrow, but not sink under its oppression; the heart of a wise man should resemble a mirror, which reflects every object without being sullied by any.

As the western clouds are tinged with gold even after the sun is lost to view, so does the memory of a kind act bring a smile to the face when its author may be forgotten.

Who can look down upon the grave of an enemy and not feel a compunctious throb that he should have warred with the poor handful of dust that lies mouldering before him?

Feasts, and business, and pleasures, and enjoyments seem great things to us, while we think of nothing else; but as soon as we add death to them, they sink into an equal littleness.

A writer has compared worldly friendship to our shadow; and a better comparison was never made, for while we walk in sunshine it sticks close to us, but the moment we enter the shade it deserts us.

The greatest loss of time is delay and expectation which depends upon the future. We let go the present, which we have in our power, and look forward to that which depends upon chance—and so relinquish a certainty for an uncertainty.

We say love is blind, and the figure of Cupid is drawn with a bandage round his eyes. Blind! yes, because he does not see what he does not like; but the sharpest-sighted hunter in the universe is Love for finding what he seeks and only that.

You see men of most delicate frames engaged in active professional pursuits, who literally have no time for illness. Let them become idle, let them take care of themselves, let them think of their health, and they die. The rust rots the steel which use preserves.

The greatest man is he who chooses right with the most invincible resolution; who resists the sorest temptation within and without; who bears the heaviest burdens cheerfully; who is calmest in storms and most fearless under menaces; whose reliance on truth, on virtue, and on God is most unflinching.

Now not wishes in other people's gardens; wish not for that which you are not, but earnestly desire to be the very best of what you are. Endeavor your best to perfect yourself where you are, and bear manfully all the crosses you may encounter. This is the leading principle and the least understood in a good life.

Many of us love to note when things go according to our wishes, the guiding hand of God, but why not believe more that He leads us all the time—that not only when He clears the way for our feet can we see His hand, but when hindrances are suddenly laid in our path? Instead, how often are we troubled and ruffled because we do not see the way—our way—clear.

One day you will be pleased with your friend and the next day disappointed in him. It will be so to the end, and you must make up your mind to it and not quarrel, unless for very grave causes. Your friend, you have found out, is not perfect. Nor are you, and you cannot expect to get much more than you give. You must look for weakness, foolishness, and vanity in human nature; it is unhappy if you are too sharp in seeing them.

A Case where Ignorance was the most Sublime Bliss.

"It is when our budding hopes are nipped beyond recovery by some rough wind that we are most disposed to picture to ourselves what flowers they might have borne had they but flourished."—*Dickens*.

Callybaste is an exceedingly pretty little hamlet of but a few hundred inhabitants, nestling cosily in the depths of a peaceful valley. A walk of five minutes under a beautiful arbor of spreading trees will bring you to the seaside, where you can enjoy a bath that is at once pleasant, and healthful and invigorating. From there you can ascend to the top of the stately headlands, and, reclining lazily on the grass, drink in deep draughts of the most delicious and bracing of sea breezes, while you follow with your eye the progress of dozens of vessels as they glide so smoothly and majestically over the placid surface of the great trackless ocean.

There is no quieter or more delightful spot on this vast globe of ours in which to spend a summer vacation, away from the humdrum bustle and confusion of the great centers of industry, than this same Callybaste. Often have I strolled listlessly and aimlessly along its pebbly strand, or thrown myself wearily down among the luxuriant grass near the top of one of its cliffs, and wished that my fortune were made that I might retire to the solitude of the dear, quaint old place, and there spend the remainder of my days in peace and quiet, "the world forgetting, by the world forgot."

The whistle of the locomotive has never startled the ears of the good, easy-going inhabitants of Callybaste. Their only means of communication with the outside world consists of a stage coach, which plies between the latter burgh and the larger and more enterprising town of Mallyboney, some fifteen miles distant, from whence they can proceed on their journey by rail.

Three years ago I spent part of the summer at Callybaste. I knew about everybody in the place, but one day a strange young lady arrived whom I had not hitherto seen. She stopped at Mr. Allison's, and inquiry elicited the fact that she was a Miss Emma Blake, niece of Mrs. Allison, and sister of Miss Fannie Blake, with whom I was slightly acquainted, and who lived with Mrs. Allison, both the Miss Blake's parents being dead.

I subsequently saw her several times as she took her walks abroad. She was young—not more than seventeen, medium height, of genteel, graceful figure, a fresh, clear complexion, bright, pretty, blue eyes, and more than ordinarily handsome.

Being quite intimate with a gentleman who was looked upon as her sister's beau, I learned that Miss Emma lived with an aunt in the city of Felbast, about fifty miles from Mallyboney, was an accomplished musician for one so young, had written some really excellent poetry, and was also quite proficient as a landscape painter. In fact, so enthusiastic was my friend in her praise, that I asked him if he wouldn't give me an introduction. He said he would.

The following Sunday she presided at the organ in the little village church, and for one I thought that the walls had never echoed to so delightful music. Afterward I read some of her poems, and I remember they struck me as being second only to Eliza Cook's. But whether she left sooner than I anticipated, or my bashfulness, as usual, stood in the way, I do not now recollect; certain it is however, that I did not get the introduction.

When my vacation was over I left Callybaste, and went "back to busy life again," and in the contemplation of more pressing, practical and prosy matters, had scarcely time to devote even a passing thought to Miss Blake. And yet I did think of her, too, sometimes.

Although fully appreciating how absurd the idea was, I used to take great pleasure in closing my eyes, and imagining that I was on my way to Callybaste, and at Mallyboney had found that the only other passenger and occupant of the coach was Miss Blake. How easy it would be to obtain an introduction in some way, or even introduce myself, if I could summon up enough moral courage, and then two and a half mortal hours of unalloyed happiness!

At this point, however, these pleasant fancies invariably came to an abrupt and untimely end. It began to dawn upon my mind with startling suddenness that, in a world so much out of joint as this of ours sometimes appears to be, so happy a combination of events would be a delight too great to ever in reality seriously hope for.

In the light of past experience, moreover, I knew beyond peradventure that such fascinating day-dreams have a despicably unpleasant manner of

turning out intensely, cruelly, severely fallacious, and that it is best to set one's face persistently against them.

Well, I visited Callybaste during the past summer. At Mallyboney, I need hardly say, I did not meet Miss Blake journeying in the same direction, nor did I even see her when I reached my destination.

One evening a couple of weeks after my arrival, I met a gentleman whom I knew walking arm in arm with a lady. Supposing the latter to be his daughter, I raised my hat in passing, only to find that his companion was a lady whose face was not familiar.

About a week later I was going off on a brief visit. Walking ahead of the coach for a short distance through the town, Mrs. Allison saw me, and noticing my traveling costume, asked if I were going as far as Felbast. I said I was.

"I'm glad of that," she replied. "My niece Emma is going up, and, being alone, I shall be under deep obligations if you will take her under your kind protection during the journey."

When I replied that nothing would give me greater pleasure, I meant precisely what I said. Then I remembered the strange lady I had met, and wondered why I had not recognized her. I also felt particularly pleased with myself and the rest of the world that my long-cherished day-dream should have, strangely enough, been so completely realized, although it was slightly reversed. The reversing, however, was a decided improvement, as it gave me double the length of time in Miss Blake's company that I should have had had I met her at Mallyboney. Besides, in putting her under my special care and protection, had not her aunt effectually broken the ice, and removed any difficulty there might have been in the way of our getting acquainted?

I walked on a short distance farther, and when the coach came up and stopped, I approached my fair protégé, and in a voice intended to be very sweet and tender, even winning, remarked with a smile:

"I believe I've had the pleasure of an introduction to you—by proxy, so to speak."

"Yes," she replied, sweetly, extending her hand with a frankness and heartiness that at once won my heart, if that citadel had not already capitulated, "my aunt spoke of you, and," moving over to make room for me—"I'm sure I shall be grateful for your care and company."

Though more developed than when I last saw her, she was still girlish in appearance, and "Time's effacing finger" seemed to have wrought but little change in her. Like Arbutnot's heroine, "She was about in the due mean between one of your affected, courtesying pieces of formality, and your romp, who has no regard for the common rules of civility." During conversation she looked squarely into my eyes, and when anything especially interesting was said, her own perfectly sparkled with enthusiasm.

Now, I have sometimes been in a position where I would have given anything in this wide world to have conversed freely, and made myself extremely agreeable, and, yet, although straining every nerve toward engaging my companion in conversation, and creating a favorable impression, found that I could not hit upon a single subject in which he or she was sufficiently interested to make the conversation entertaining; or, under similarly embarrassing circumstances, I have attempted to speak of and quote from writings with which I was perfectly familiar, and only succeeded in getting authors so badly mixed, and quotations so woefully confused, and transposed, and muddled generally, that I would positively seriously question whether I had ever read the books or articles at all!

But there was nothing of the kind in the present instance. We seemed to be in perfect accord. She loved poetry, so did I. The authors I particularly admired, she in a measure adored, while the writings of those I did not care for, she had always considered, so she said, supremely stupid. When I attempted to quote anything, I repeated it as correctly as if I had had the book in my hand, and the right quotation always seemed to come at the right moment.

So that ere I was aware of it we had reached Mallyboney. Here there was half an hour to wait. But I don't think I should have particularly objected had the delay been ten times as great. Of course I attended to her baggage, ticket, etc., and when the train arrived secured two eligible seats. She seemed so pleased at these little attentions, and remarked, with so charming a smile how pleasant it is to travel with a man who understands just what to do, and thus saves one the innumerable little an-

noyances that conspire to keep a woman traveling alone in constant hot water, that I could not refrain from suggesting, in the most roundabout way in the world, that the same rule applied equally as forcibly, I thought, to travelers on the great journey of life. Then we proceeded. The same pleasant conversation was resumed, only that it seemed even more enjoyable than before. We were all the time becoming better acquainted, and seemed to be getting to understand each other's natures better. All too soon, however, the train rolled into the depot at Felbast. Alighting quickly, I assisted my companion to the platform. Just then a gentleman, who had been peering anxiously into the faces of the incoming passengers, approached and shook hands with her. Turning around to me with a smile that, under other circumstances, would have made any male heart go pit-a-pat for an hour, she presented the stranger, and ruthlessly pricked the bubble of my pleasant little summer idyl at one and the same time by remarking, as coolly as if such a thing were a mere matter of course:

"Mr. John-ston, permit me to introduce to you my husband, Mr. Kahn!"

Pretty rough, wasn't it?

W. J. J.

A Romance in Real Life.

Lieutenant Philip Reade, who for the past three years has had charge of the U. S. Military Telegraph line in Arizona, before his departure for Washington received a highly complimentary testimonial signed by all the operators on the line. The lieutenant has been experimenting very successfully with the telephone in that frontier country.

It is rumored that the Imperial Government of Japan has offered him the position of Director General of Electric Lines in Japan, under a five years' contract, at \$7,500 a year, which position he has decided to accept, provided he receives the requisite permission from the War Department at Washington, without prejudice to his present army commission. His assistant will be Mr. H. B. Smith, Jr., to whom he will delegate the chief charge of the telephonic arrangements, three cases of which were invoiced to Japan per City of Tokio on her last trip.

The lieutenant, besides rendering himself extremely popular, both with his subordinates and the public in Arizona, was a hero a few years ago of an interesting romance in real life, which may prove interesting to the readers of THE OPERATOR. There is more romance happening all around us than most people have any idea of. Mr. Orton's life was full of romance. From a poor printer in a country newspaper office he rose to the responsible position of chief of the Western Union Company, wielding a power such as few men in this country can boast of. There has also been considerable romance in Mr. Edison's life, as will be seen from the article in our next issue; and there have been few cases of more wonderful romance evolved from the brain of a novelist than is to be found in the career of Stanley, the *Herald's* African explorer. Thirty years ago Stanley was born in a Welsh poor-house. A few weeks ago the charity boy, since the hero of many strange adventures and vicissitudes, dined with the Prince of Wales, and received an ovation from the Royal Geographical Society.

But Lieutenant Reade's romance was not exactly of this character. It began on a bright Sunday morning in spring, several years ago. On that morning the lieutenant was walking through the streets of Topeka, the beautiful capital city of Kansas.

Although he paced along briskly, he did not appear to be making his way toward any point in particular, but rather, while viewing, with the curious gaze of a new comer, the broad and beautiful streets, and the fine, and in many instances, splendid structures, with which they are adorned, he allowed the inclination of the moment to guide his footsteps.

There was a Sabbath stillness in the air that seemed to hold the soul in welcome captivity. Perhaps some subtle influence of this kind may have appealed to our traveler, for he paused in front of a church of inviting exterior. It was a gray stone Gothic edifice, of medium dimensions, with creeping vines clothing its rough sides and trained to run forward above the wide porch. It stood somewhat back from the street, from which it was separated by a low, well-built wall of dark stone, and by a broad walk bordered with a closely-shaven lawn, upon whose fresh deep green the eye rested with pleasure.

Acting on a sudden impulse, he pushed open the gate and entered. Scarcely had he done so, when he was startled by the terrified scream of a female,

and, turning quickly, he saw a neatly dressed young lady almost literally flying toward him, pursued by a mad bull. Swift as thought he opened the gate with his left hand, and drew out a revolver with the right, and as the frightened lady passed swiftly in, for fear had given her the wings of the wind, he placed himself directly behind her, and calmly awaited the onset of the infuriated brute. In another instant, it his nerves had been unsteady, or his revolver missed fire, he, and she whose shield he was, must have been trampled to death. He took deliberate aim, and as the raging animal was dashing upon him, with lowering head and tail erect, he fired, and the bull fell lifeless at his feet, pierced through the heart.

Leaving the crowd that had gathered around the carcass, he asked the agitated young lady, who, he could not help noticing, was exceedingly pretty, if she would rest within the church, while he went to fetch her a glass of water to revive her. Thanking him in a voice that was barely audible, she took his proffered arm, walked into the church and sat down. Several gentlemen pressed around him, and, taking him by the hand, testified by the heartiness of their grasps the strength, sincerity, and warmth of their feelings. In answer to their questions, he told them that his name was Philip Reade, and that he was a lieutenant in the regular army. The church bell now began to ring, and the coming congregation flocked to see the brave young officer.

When he finished conversing with his new made friends, and divine service was about to commence, he found, to his surprise, that his companion in peril had disappeared. All through the services, into which he now entered with a zeal and zest which he had rarely if ever felt before, he was much attracted, and at last fairly fascinated, by the leading soprano voice in the choir. It rose above all the other voices in a rich, round, delicious swell, and was marked by a bell-like clearness of tone and abundant power. When the singer sang alone, passionate outbursts of praise and thanksgiving filled the church, and fell upon the congregation in rapid showers of glorious, rapturous song. It penetrated to his soul, and moved him to tears, of which he was unconscious until he noticed the pearly drops descend upon his clothing.

Instinctively he turned his head, hoping to catch a glimpse of the sweet singer. Their eyes met, and, amazed yet delighted, he recognized in the chorister the young lady he had saved. She was then pouring forth a gush of joyous melody to the accompaniment of the organ's deep, low notes. The lieutenant thought that never in his life had he heard anything so divinely beautiful. Again, for an instant only, he scanned that Madonna-like face, gloriously lighted up and beaming with heavenly beauty. He had met his destiny. The heart of the young soldier was conquered. As his fancy dwelt on that saintly countenance, he felt himself encompassed with a perfect halo of ecstatic bliss; and then and there, in the presence of Almighty God, he silently and solemnly vowed to devote his whole future life to winning and cherishing her who had thus taken captive his soul.

As he pushed through the throng, when the service was over, "the observed of all observers," one thought was uppermost in his mind, "How can I become acquainted with her?" On reaching the vestibule, a plainly clad lady, somewhat past middle age, whose pale face bore the marks of grief and suffering, accosted him.

"Sir, I cannot tell you how much I thank you," she said, "for saving my daughter from that terrible brute. She is now my sole stay and support."

And then, with a diffident glance, she added, "If you would kindly accept our poor hospitality, I should be so glad to have you take dinner with us to-day."

Of course he gladly embraced the opportunity; and, as they neared the gate where the bull had fallen dead, they were joined by the sweet songstress. Her mother now attempted an awkward introduction, beginning:

"Minnie, you know this is—"

But Philip relieved her by remarking, with a smile and a bow:

"Oh, we have met before, madam;" at which they all three laughed, and were at once at their ease. His name was known to them, and they told him theirs was Mirand.

Mrs. Mirand was a widow, and Minnie was her only child. In her husband's lifetime they had been comparatively wealthy, but owing to an unlucky speculation in which he had invested the bulk of his fortune, he became insane, and shortly afterward died. The little property left to her was consumed by degrees in the bare necessities

of life, and soon she found herself utterly penniless. Minnie, always fond of singing and music, and having in better days enjoyed the advantages of good teaching, had been watching for a vacancy in the church choir, with the design of offering herself as a candidate for the position. After long and weary waiting, when on the very verge of starvation, and when heaven itself seemed insensible to their tears and prayers, she finally succeeded in getting a situation in the church where Philip had heard her wondrous voice. The mere pittance she received barely sufficed to give them food and shelter. But she was penetrated with an inextinguishable love of her art. Indeed, the dream and scheme of her life was to go to Italy to perfect herself in music. While she was singing she was supremely happy; for, while she sang to live, she lived to sing. But she knew her defects, and likewise knew that proper training under competent masters would remove them. And furthermore, she had faith in her own gifts, and was firmly convinced that they would yet raise her to fame and fortune.

Philip had only intended to stay over Sunday at Topeka, to view the place. But, after the lapse of a fortnight, his Post-office address was still at the "potato" town, so called from the meaning of the Indian word "Topeka." He continued to defer going home, where he had intended to pass the three months' furlough which he had well earned by a long term of service on the frontier. He became a frequent visitor at the cottage, and his interest in its inmates grew daily stronger and deeper. Besides the lively sense of gratitude that Minnie cherished toward him, his enthusiasm for music, his fine ear for melody, and his splendid, though uncultivated baritone voice, made his society ever welcome to her, and their meetings were a source of mutual delight. Over and over again he declared it to be a shame that such a voice as hers should be buried in a little western town, and urged upon her to settle in New York, after passing a couple of years in the European schools of music, so that her talents might be brought before the great world. But gradually he learned her history, and her straightened circumstances, and saw that she was bound fast to the spot that gave her but stunted daily bread.

One evening they sat in silence on a rustic bench upon the summit of the green knoll that overlooked the tiny cottage. A gentle breeze fanned their brows, and the rays of the setting sun tinted their faces with a bright, unearthly hue. Never before had they appeared more attractive to each other. The evening hush harmonized with their deep but quiet joy.

"Minnie," at length murmured Philip.

She gave a little start as her large, dark eyes met his ardent gaze, and her lovely face flushed crimson—for it was the first time he had so addressed her.

"May I not call you Minnie?" he asked, gently taking her unresisting hand.

"Yes—Philip." This in soft accents, her long, black lashes nearly veiling her beautiful eyes.

A delighted smile gave an added beauty to his fine, expressive countenance. He resumed speaking in a voice that trembled a little at first.

"Well, then, Minnie, I am to-day twenty-five. By my father's will I have this day sole and undisputed control of the fortune he left me. His will contained the clause that his heirs should enjoy only the income of each one's share of the estate up to the age of twenty-five, and as each attained that age, the principal should become vested in him or her. Meanwhile the property was placed in the hands of trustees. I am, therefore, as I have said, master of my share. Here"—taking from his pocket a legal looking document—"is a deed of gift which I have executed this day in your favor, and which places you in possession of my fortune, which is large enough for all your needs. Here is likewise a letter to my trustees, directing them to deliver the property to you without delay. Take it," he said, placing the papers in her hands, "and carry out your long-cherished plans. Fulfill your destiny."

Saying which he rose and would have departed, but she detained him, laying her hand upon his arm.

A short but expressive pause ensued ere she spoke. "No, no!" she said, deeply moved: "I cannot accept it. This is a noble self-sacrifice of yours, but such a munificent gift I feel that I ought not to accept at the hands of any one upon whom I have no real claim."

Her tone and manner, though gentle and grateful, were decision itself.

"No claim upon me!" he passionately exclaimed. "You have more claim upon me than any other

human being. I have vowed to live only to make you happy. And I now renew that vow. If you will not accept this gift from me, then accept it from your husband. Minnie, darling, I love you. Will you be my wife?"

He held out his arms, and she flew to his embrace.

All through the gloaming they discussed plans for the future, and Mrs. Mirand had to call them twice very loudly to come to tea. One month from the day of their betrothal they bade adieu to Topeka, and took the train to New York, Mrs. Mirand of course accompanying her daughter. How happy the old lady was! And Philip and Minnie, could they ever forget that thrice blessed month?

On the journey they settled upon the wedding day; and one week after their arrival in New York they were married in church in the forenoon, a select party of relatives and friends witnessing the ceremony. Immediately thereafter they entered the same carriage in which they had arrived, and were driven to the dock whence sail the Liverpool steamships of the White Star Line. In one hour's time from the moment they were made one in the sight of God and man, these two heroic souls parted from each other, Minnie going to Italy, to realize her ideal, and Philip returning to military duty in Arizona, where he had been unexpectedly ordered—one, crushing out her own antagonistic desires, to obey the inward and irrepressible promptings of the art-nature; the other sacrificing his conjugal happiness to the wishes of his beloved. What rare devotion!

Months and months elapsed. He never faltered in adherence to his vow. If she were but rendered happy, though his heart might break, he was content. On the eve of a battle with the savages, he always read her letters—and they were truly love-letters—as one would read prayers; and, like the prayers of childhood, he knew them by heart.

Five years had glided by. In the wilds of the western country he had, with unspeakable pleasure, read in European journals the story of her wonderful success as a prima donna. Royal courts applauded the Topekan songstress. The most critical audiences of France, Italy, and Germany went into ecstasies when she sang. She was known as "La Topekana," though it would, perhaps, have sorely taxed the geographical knowledge of the best informed among her admirers to have been obliged to say where Topeka was.

And now she was coming home after her foreign conquest, to bring her native land to her feet. In every letter now she dwelt on the happiness that was in store for them. And his answers, what tender, heart-felt rhapsodies they were! At last he received word from her that she would leave Paris for New York on a certain day. Then he obtained leave of absence, and came within the pale of civilization for the first time since he had parted from her.

It was spring time when he started eastward, and it happened that he arrived at Topeka on a Sunday morning. Learning that he would lose nothing by staying over one day, he resolved to visit again the gray-stone gothic church, to go to the little cottage, and, last, though not least, to climb the green knoll where they had plighted their vows. How pleased she would be when she heard from his lips where he had been while on his way to meet her! With him to decide was to do, and ere the train had moved on he was in the main street of Topeka.

As he walked toward the gray stone church he promised himself rare felicity. He had contracted a fondness for feeding on his own thoughts, and he thought almost continually of Minnie. There was a fascination to him that was quite indescribable in going over in imagination all the events that led to his marriage. Coalesce then, if you can, his mental joys, serene yet exquisite, during that Sunday in Topeka, where at every turn he saw something that vividly recalled some scene in the most blissful episode of his life, which he expected so soon to be renewed.

He had purposely delayed climbing the knoll till evening. The occupants of the little cottage, with true western hospitality, had made him thoroughly at home. His fine, frank face, now somewhat tanned, was more than ever the index to a noble soul, and made him an immediate friend in almost every one he met. As the sun began to decline he made his way to the top of the hill. The rustic bench was still there, though something the worse for the wear and the weather. He sat down where they two had planned the very journey that had resulted in their long separation. And now that fame and fortune, secured by his self denial, were her's, he could meet her with proud joy, and

they would say to one another: "Henceforth, we will be together until death does us part. This we have earned." Occupied with these thoughts, he surveyed the familiar features of the scene which his fancy had so often recalled. As he looked around, his attention was arrested by a rose bush which he remembered they had planted near that very bench in commemoration of their betrothal. He could see again her innocent, joyous, laughing eyes, as she helped him to scoop out the earth for the reception of the slender cutting. It had flourished exceedingly well. He thought he would take her a slip from this beautiful rose bush for transplantation. How pleased she would be to possess it! Stooping down, and seizing a branch to break it off, a sharp thorn pierced his flesh, and at the same moment a newspaper dropped from his pocket. It was the latest copy of the New York *Lieald* that had reached Topeka. He had bought it at the station on leaving the train. As he picked up the paper a word caught his eye. That word was "La Topekana." With a shiver of expectation he hastily opened the newspaper, and read among the cable telegrams as follows:

"PARIS, May 24, 1876.

The celebrated American singer, "La Topekana," died suddenly this morning."

Echoes from 197.

Nicholas Wiley and his patent leather slippers again enliven the office.

Pete Flynn has been transferred from Stewart's office, city, to the main office.

Asa Davis, manager of Chattanooga, Tenn., office, has been spending some weeks in this city.

W. H. Groff, known among the lady operators as "High Tide," paid a flying visit to the city last week.

Charles and William Bennett have returned after a long and pleasant vacation spent at their home in Canada.

The Western Union messengers subscribed sixteen dollars for a basket of flowers for Mr. Orton's funeral.

The switch in the operating room is heavily draped out of respect to the memory of the late President Orton.

John Lenhart has gone into the clothing business; he is with Max Stadler & Co., Broadway, corner Prince street.

John Hurd, who has had charge of Sandy Hook office for several years past, has been transferred to 197 Broadway, N. Y.

Mr. Daniel E. Pike, of the Gold and Stock, who has been South during the winter on account of ill health, has returned immensely improved.

Manager Downer sprained his ankle recently. The accident prevented him from attending the second athletic meeting of the N. Y. operators.

Several changes have taken place on the day force lately. David B. Mitchell and George Sawyer have been assigned to night duty, and Percy K. Jones and James P. Bradt have been put on the 12 to 9 trick.

Chief operator Tom Kennedy has just completed seven years service on the night force. During that time the regular night force has increased from 15 to 70 men, and with the nine o'clock men added it would give a grand total of nearly 100 operators at present.

Our Aldermen are both printers. Messrs. Scully and Blanchard possess in an eminent degree the qualities supposed to be characteristic of all who attain aldermanic honors. Bland, genial, gentlemanly and *embonpoint*, they have hosts of friends both within and outside of telegraphic circles.

The second meeting of the W. U. Athletic Club took place at the West Side Park, N. J., April 13th. There were eight starters in the handicap mile race. Messrs. Foster, Mavor and Bradt were awarded the first, second and third prizes respectively. D. C. Donohue, of the night force, won the hop, skip and jump, and also the standing long jump, covering 8 feet 11 inches. Five started on the hundred yard dash, which was won by Mr. Mitchell in the remarkably short time of 11 seconds. Jack Bell was a good second. The sport ended with a comical three leg race, won by Messrs. Landy and Merrill by about a foot from Moffit and Bradt.

Speaking of the late President Orton, a correspondent in the main office says: To the majority of telegraphers, in fact I might say to all telegraphers, Mr. Orton was known only as the head of a large,

soulless corporation, but from the manifestations of grief evidenced by all who knew him, either socially or professionally, I am satisfied that he was a man of generous impulses, great kindness of heart, and just in the highest degree. He has left behind, as a monument to his greatness and worth, a national reputation and a stainless character. No man ever accused William Orton of chicanery or deceit. He was always frank, honest and just. There is much in his life that we younger men can, with profit to ourselves, study and imitate. He died as he lived; unshaken in his faith of a higher and better existence in the life everlasting.

Chicago Notes.

At a meeting of the fraternity, held Monday afternoon, April 8th, of which R. W. Ledwith was chairman and C. H. Haselton secretary, suitable resolutions were passed on the death of John J. Powers, those present bearing loving testimony to his good qualities of heart, consistent and steadfast friendship for his co-laborers, and bright and varied mental qualifications. Through the courtesy of Gen'l Supt. Tinker of the A. & P., and Supt. Wilson of the W. U., cars on the Northwestern road were secured for transporting all who desired to accompany the remains to Calvary Cemetery. The thanks of the fraternity are due to the Northwestern Railroad officials for this act of kindness to the telegraphers of Chicago. Messrs. Sunny, Bentley, and Ramsey, of the A. and P., and Haselton, Holligan and Lloyd, of the W. U., acted as pall bearers. A beautiful floral cross, contributed by the operators, decorated the casket. All the necessary expenses, exclusive of absolute funeral expenses, were paid from a fund liberally subscribed by the telegraphers of the A. and P., W. U. and Board of Trade Co.'s, whose generosity on this occasion is deserving of special commendation. The friends of the deceased of this city propose using the surplus from the funeral subscription, in conjunction with such sums as Mr. Powers' many friends throughout the country may contribute, to erect a plain tablet over his grave, as an evidence of the appreciation of his manly efforts in behalf of, and his friendship for, the fraternity. The editor of THE OPERATOR is authorized and requested to receive such subscriptions.

Since my last there have been no new arrivals except the addition of F. C. Swain, formerly manager, to the night force, Milwaukee report. Jno. W. Smith is now a "floater," R. W. Ledwith having succeeded him on the Buffalo quad at John's request. F. J. Boyle has been transferred from Buffalo quad to Salt Lake duplex nights, and M. McColloch from Keokuk report to Buffalo quad. No changes on the day force excepting that Ed. Dorval and Adam Beidler have exchanged wires, the former working "overland" and the latter Pittsburgh quad. A Philadelphia artist insists that a certain action of Congress meets with *ungratified* condemnation. Book it ungratified.

All the money necessary to build and equip the new line from this city to Milwaukee has been subscribed, and the wire purchased. Officers have been duly elected, and soon there will be another Richmond in the field. Rumor says that O. M. Stone, now with W. U., has been offered the Superintendency. Glad to hear it. Deserving appointment if true. Rumors are also rife of a volcano about to belch forth its burning lava; but don't mention it.

XERNES.

PERSONALS.

C. J. Barclay, of the N. Y. quad, Baltimore, has been transferred to the Philadelphia office.

Charley R. Zacharias formerly of Mechanicsburg, Pa., has been appointed manager of the W. U. office at Camden, N. J.

Johnny Langstaff, who has been working during the winter at McComb City, Miss., for M. O. St. L. and C. R. R., has gone back to Canada.

Mr. P. M. Brigham has been appointed manager at St. Petersburg, Fla., and Mr. W. John Hunter at Petrolia, thus reducing the force at Parker to two men, business being dull.

An operator on a visit recently to East Saginaw, Mich., called at one of the telegraph offices, and noticing the steam heater, innocently inquired if that was the telephone!

Samuel E. Mobbs, an old timer, has resigned his position at Hyannis and gone to his home at Sherbrooke, Que. Mr. E. E. Field, late of A. & P. offices Fall River, has been chosen to fill the vacancy at Hyannis.

A. Wilson, Jr. for many years manager of Baltimore office, having retired to engage in other business, Mr. N. Debee has been appointed his successor. Mr. Wilson has since accepted a position on the night force, same office!

Manager Shoemaker, of Pottsville, Pa., says that an operator calling himself Richard L. Boyer, of Philadelphia, has recently swindled telegraphers and others in that place. He warns his fraternal brethren to keep their eye on Boyer.

Mr. J. G. Thornton, formerly Superintendent of the S. & A. Telegraph Company, and recently Assistant Superintendent W. U. Telegraph Company at Augusta, Georgia, has been appointed Superintendent of the International Ocean Telegraph Company.

N. E. Burroughs, train dispatcher F. N. S. & C. Div., L. I. R. R., has accepted the position of train master and dispatcher of the Manhattan Beach Railroad at Greenpoint, L. I. Frank S. Gannon has been appointed as general dispatcher of the three divisions.

LOUISVILLE & NASHVILLE R. R.—C. W. Priddy is agent and operator at Paris, J. R. Gilbert at Henry, Morgan Greene at McKenzie, Ed. Coleman and Mr. Murray at Milan, John Dorris and Mr. Williams at Humboldt, H. Owen and T. W. Samuels at Brownsville.

Messrs. W. C. Albee, of St. Paul, and A. E. Chantler, of Minneapolis, recently presented Mr. H. V. Dougan, train dispatcher of the former city, with a handsome gold watch, chain and seal, the gift of the operators along the line with whom Mr. Dougan is deservedly popular.

The Broker Line, a new opposition company, designed to connect with the new Centennial, has been built from Titusville to Oil City, Pa., and will soon be extended to Parkers and Bradford. Col. W. A. Drake is manager at Oil City, and E. J. Seward at Titusville. F. F. Lovejoy, an old operator, is Supt.

The Western Union is about moving into a new office at Oil City, Pa. There are to be 6 new black walnut quartette tables, N. Y. style, to accommodate a quad, 3 duplex and 14 single instruments. The force consists of manager M. E. Luce, assistant, Frank Ross, and operators J. B. Coulter, W. M. Talcott, Ed. A. Keene, Jas. P. Keene, J. B. Skelley, F. Miller, and B. R. Stevely, with three receivers.

H. & N. W. R. R., CANADA.—Chas. Hotchkiss is dispatcher at Hamilton, A. A. Farmer is agent and operator at Burlington, where the Dominion office is in charge of Walter Bastedo, and the Montreal office of Thos. Graham; Sam Moore and Walter Grayson are at Georgetown; at Cheltenham are Ed. Whiteside and N. Sinclair; Jimmie Dickson is at Allendale and Mr. Thornton at Barrie.

Considerable excitement was created in telegraphic circles in Baltimore during Monday and Tuesday over a rumor that G. S. Moit had been, or would be, appointed President of the Western Union Company, vice the late Mr. Orton, and that Wm. Bevan would relieve Mr. Anson Stager; but on investigation the report proved without foundation, and things quieted down naturally when the boys found that there was nothing in it.

U. P. R. R.—Mr. A. C. Lathrop has returned from a long visit to the States, and again takes charge of his old station as agent, Bryan, Wyo. M. L. Metter, late agent at Bryan, has been appointed agent at Piedmont. James Graham, operator at Carter, has been appointed agent at Bridger. Fred Hirst, agent at Bridger, has been transferred to Peterson, Utah, as agent. R. Phillips, agent at Peterson, has been transferred to Granger, Wyo., as agent. J. A. Van Loven has relieved Mr. Graham at Carter. J. R. Hunter is operator at Weber Quarry. Mr. Darby, operator at Bryan, is on the night force.

B. & O. R. R., CHICAGO DIVISION.—At Chicago junction, eastern terminus, and junction of the Lake Erie Division, Mr. Kirby is day operator; at Tiffin, George Smith days and J. F. Ary nights; at Falsoria, M. J. Furguson; at Dessler, W. M. Porter; at Defiance, H. B. Lawrence and Mr. Nelson; at Auburn Junction, Ind., F. P. Copper; at Garrett, Messrs. Berdell, Balkus and Fordyce dispatchers; and J. D. Flynn division operator; at Albion, Charley Long; at Syracuse, Frank Eymann; at Milford Junction, D. C. Hastelter; at Bremen, Ind., Frank Horton and Chas. Lehr; at Wellsboro, Miss D. E. Goodell; at Kingston, Ill., (shops) James Mathews; at Baltimore Junction, Ill., Elmer Wollcott.

PHILADELPHIA ITEMS.—Frank Farley, the great tourist, is now in Philadelphia, and proposes to stay some time with us. There is a growing disposition to increase the number of lady operators in this office as opportunity offers. It is expected that the A. & P. office here will be closed for good on May 1st or thereabouts, thus throwing an increased amount of telegraphic labor on the already over-crowded market.

C. B. & Q. R. R. CHICAGO DIVISION.—At general offices, Chicago, "Rh" are Messrs. Earnshaw and Puffer, days; Frank Eck, nights. At Freight House: J. H. Curtis, days, and A. J. Smith, nights. At Grand Crossing: U. J. Fry and McComber. Riverside: Lang and Pooler. Hinsdale: Holyoke and Winsler. Downer's Grove: C. H. Smith and Frank Sindley. Naperville: Hodgetts and Wilson. North Switch: F. S. Woods and "Tommy" Bree. At Aurora—Train dispatchers: Jno. Woods and H. Tubbs, days, and Messrs. Clark, Baily and Miller, nights. Geo. E. Simpson is chief train dispatcher of division, with headquarters at Aurora; Greenfield tends to commercial work at "Au" Aurora, days; West Aurora, Jacob and Miller; at Bristol, the Dolen Bros.; at Plano, Sherman and "Ice Cream" Kane; Sandwich, H. A. Pearsall and Chas. A. Woods; Somouank, McNevin and Johnny Mack; Selaua, Brown and Metcalf; Earl, Miss Gammon (the pet of the line) and Mr. Hausel; Meriden, Mr. Beecher. At Mendota, end of division: Messrs. Lytle and E. Munger dispatch trains on Clinton branch and answer calls on main line.

L. S. & M. S. RY., TOLEDO DIVISION.—At Toledo Wm. Klein, Jr. is Supt. with A. L. Smith as head clerk, at the yard office "Ax" are McGuire, days, and J. Miller nights; stock yard, W. C. Worrell day, and Mr. Tait nights; Millsbury, Miss Durand days, and Mr. Knapp nights; Genoa, Ed. Hatch; Elmore, Miss Flo De Voe; Lindsey, W. S. Stevens. Fremont, J. H. Klein, days, and Mr. Caul nights; Clyde, J. S. La Fever; Bellevue, W. H. Dimick and B. F. Arnold; Monroeville, Frank Myers and A. G. Corwin; Norwalk, G. A. Hinman and S. Cooke; Collins, F. Pierce; Wakeman, J. K. Lewis and Will Reed; Kipton, W. E. Triabue; Oberlin, Miss R. Young and Al. Penfield; Elyria, A. Bassett, Will Beebe, and E. M. Shrope, Shawville, Z. A. Shaw and J. Curran; Olmsted, J. F. Barnum and Mr. Maxwell; Berea, Mr. Phillips and Mr. Ramsdell; Rockport, S. Padley and Geo. Arnold; Cleveland, "Yd" office, Fred. Preston and Frank Baus; "V" office, H. W. Stager, J. M. Watts, E. G. Watts, T. Jay Biglow and J. F. Angell train dispatchers, and By Reynolds, J. Kirk Russell, Allie Watts, Wm. Mulhern, E. A. Caulfield, A. E. Kinney and Mr. J. P. Malcolm, operators.

Horatio N. Williams, for more than a score of years a telegrapher in Providence, R. I., died in that city Thursday afternoon from the effects of a dose of poison, which he took as a remedy for nervous prostration, having suffered therefrom for several months. Mr. Williams was one of the pioneer telegraphers. He learned the business thirty years ago, and up to the moment of his last illness was an operator, and a very good one. He was first identified with the telegraph business in Providence, where he served many years, afterward in Dorchester, where he was manager of the American Company's office, and again in Providence, where he identified himself with the Independent Company to assume, after a few years, the position of assistant manager of the American Company's office in that city, which he held until some time after the consolidation with the Western Union, when he went with the Providence and Worcester Railroad Company as Superintendent of that corporation's wire. Mr. Williams was the friend and associate of Colonel Spier, F. O. J. Smith, General Marshal Lefferts and many others of whom the present generation of telegraphers remember little or nothing. He was about 50 years of age, and will be remembered by all who knew him.

SPRINGFIELD ILLINOIS ITEMS.—This city is hardly known to the telegraphic world and the readers of THE OPERATOR, unless it be those of Chicago and St. Louis, who are fondly reminded of it every time the various political elements of Illinois assemble here in State Convention. Then Lazarus like, "J" "comes forth," and for a brief meteoric period, the boys remember that we hold no insignificant place, telegraphically speaking, on this mundane sphere. To the railroad telegraphers, however, it is different, for with them Springfield is a first class office, and the several roads centering here employ quite an army of telegraphers. And by-the-

bye, Mr. Editor, why is it that a more congenial, fraternal intimacy does not exist between the railroad and commercial telegraphers? Who is at fault? and why do not some of your able contributors direct their efforts toward a fraternal unity? The interests of each are common, identical, and inseparable. And the present, of all other times, seems specially appropriate for forming ourselves into "as true and as holy a league by a motto of many in one." But to return to the subject. At the W. U. office the veteran W. W. Kolchener is manager, assisted by Frank Smith, Geo. Kelchner, and Asa Fessenden as operators. Jim Wright and Charley Cloud, of Chicago, assisted during the recent Democratic State Convention. "Jim" is a periodical visitor during such occasions. At the Wabash railroad office Ed Dresser, formerly Supt. Telegraph, is train master; J. M. Walker, chief train dispatcher, assisted by Sam Knight, Wm. Cruikshank, Charley Cumpston, and Charley Paine. Mr. Cumpston is a new arrival, and was lately with the W. U. at Ft. Wayne, Ind. "Jeff" Gwynne still occupies the position of Supt.'s operator. The A. and M. are represented by Joe Paudstone. At the Illinois Central, Joe Murphy, a well known operator, is running trains, assisted by an able corps of manipulators.

MARRIAGES.

SEAMANS—JAMES.—April 3, at the residence of the bride's parents, by the Rev. H. S. Snodgrass, Mr. H. A. Seamans, operator, to Miss L. A. James, both of Sigourney, Pa.

SELLERS—PHILLIPPI.—April 16, at the Universalist Church, Reading, Pa., by the Rev. Giles Bailey, Mr. J. Sellers, of the P. and R. depot, to Miss Madge Phillippi.

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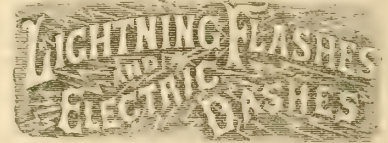
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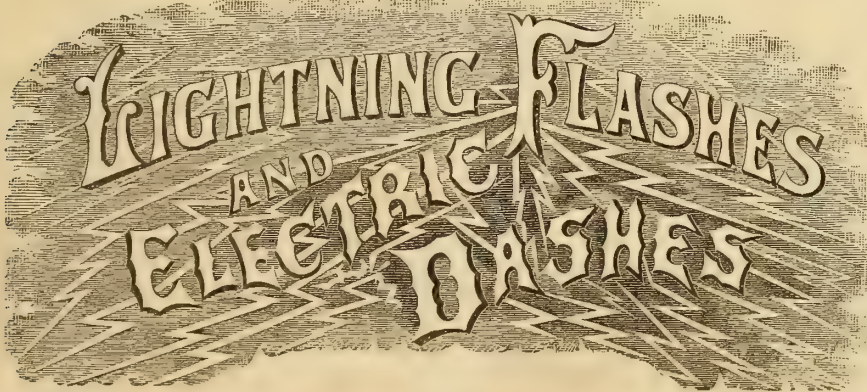
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THE OPERATOR

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May 15th, 1878.

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The Dying Operator.

(After Fawcett's Dying Actor.)

BY G. BARNES PALMER.

What time is it? Eight o'clock, you say?
Why, then, I should be at the office soon.
But no! they say I am fading away,
And will go out with the tide at rosy noon.
Then I must die! ah, me, ah, well,
My soul will find comfort, at last, at last,
And I wait for the summons of Death's weird spell,
Caring naught for the days of my perished past!

I've made my peace with the world's life giver,
I've learned to read my title clear;
And as I drift toward the dark, dark river,
I give no sigh, I have no fear!
I've had many a "cross," and plenty of "trouble,"
My life has been bitter with want and woe;
But life is something more than a bubble,
I have found that out, and am ready to go.

Still, my heart beats back to the old "day force,"
And I see the boys as I dream and doze.
There was James with his shaky Morse,
Whom the boys would ask, if he "sent" with his toes.
There was Rice, with his happy face,
A cheery voice, and a saucy wink.
And little Mace, poor little Mace!
"With his leaky purse, and his love for drink."

And jolly old Simpson, who worked the House,
And gave out jokes that the boys called "stiffs;"
And Jessie Bills, who would kick and touse
About Perkins, who "worked" at Eagle Cliffs.
But more than these; there was Billy King,
With his "gilt edge copy" and splendid "time,"
His Morse would go with a musical ring,
Like the mellow sound of a distant chime.

James died in battle—some lonely hollow,
Some rocky cleft in the mountain wall;
Ever he pressed where none might follow—
No one witnessed that hero's fall.
Rice breathed his last in the land of splendor,
Where the magnolia blossoms shed sweetest perfume,
The same old smile on his face soft and tender,
As soft as the south wind that breathes o'er his tomb.

Poor little Mace died out in the cold,
Somewhere in the West they found him, 'tis said,
Under the snow, in some sad lone fold.
"Wine, women, and song," the papers read.
Simpson and Bill sleep side by side,
And King, they've all left me, those dear old friends.
I wonder if they'll meet me on this tide,
Where they say I'll drift ere noonday ends?
New York, May, 1878.

Thomas Alva Edison.

Mr. George H. Bliss contributes to the Chicago *Tribune* of a recent date many interesting reminiscences in the life of Mr. Edison, which, we have no doubt, will prove of interest to readers of *THE OPERATOR*. Mr. Edison, he says, was born Feb. 11, 1847, at Milan, Erie Co., Ohio. His ancestry on the father's side came from Holland. The race is long-lived. Edison's great-grandfather lived to be 103, and his grandfather to be 102 years old. His father, Samuel Edison, is now living, aged seventy-four, stands six feet two inches, and is in perfect health. His mother, Mary Elliot Edison, was of Scotch parentage, but born in Massachusetts. She was well educated, and for several years taught a Canadian high school. Edison's parents removed to Port Huron, Mich., when he was seven years old, which has since been their home. Edison never went to school over two months in his life. His mother taught him spelling, reading, writing, and arithmetic. She was a fine reader, and often read aloud to the family. Edison acquired his love of reading from her, which was encouraged by his father, who paid him for each book mastered. At 10 years of age he had read "The Penny Encyclopedia," "Hume's History of England," "History of the

Reformation," "Gibbon's Rome," "Searl's History of the World," several books on chemistry, and other similar works. He read them all with the utmost fidelity, never skipping a word or a formula, although mathematics were and are especially repulsive to him. It is this habit of concentration which has led him to the accomplishment of many astonishing results. He was uneasy to get into business, and at twelve years of age his father secured him a place as train-boy on the Grand Trunk Railroad. When the road was completed between Detroit and Port Huron, he acquired an exclusive newsdealer's right, having as high as four assistants. During the four years he ran the road, his earnings averaged a dollar a day, which was given to his mother. In commencing to visit Detroit he joined the library, and started to read it through. He began on the bottom shelf, and read every book for fifteen feet, when the job was given up as hopeless, and thereafter congenial selections were made. He was an occasional reader of fiction and poetry. Victor Hugo is his favorite author. The "Les Miserables" he read a dozen times, and has reviewed it as often since. "The Toilers of the Sea" he considers a grand book. His memory is so retentive that he can quote extensive extracts from many sources, and can usually refer direct to the book and page of his scientific library for any fact or information needed for experiment or research. His mind is crammed with an immense mass of information, it being difficult to mention a subject about which he knows nothing. He has a partial knowledge of the French, German, Italian, and Spanish languages. Attached to the mixed train upon which he sold papers was a freight car having a room partitioned off for smoking purposes. As the car was without springs or ventilation, no one would ride in it. Edison obtained "Tresenius' Quality of Analysis," bought some chemicals on the installment plan, induced the hands at the railroad shop to make him some retort stands in exchange for papers, and turned the smoking room into a laboratory. The *Detroit Free Press*, then owned by Wilbur F. Storey, came out in a new dress. Edison purchased 300 pounds of old type, and for six months published a weekly paper on the train called the *Grand Trunk Herald*. The price was three cents, and the subscription list ran up to several hundred. It was printed on one side only, by hand, and was devoted to railroad gossip, changes, accidents, and information. George Stephenson, the English engineer, who built the tubular bridge at Montreal, when passing over the road found Edison at work, and sent back to England 200 copies of the *Herald*, the only paper in the world printed on a railroad train. The paper was afterward noticed by the *London Times*. One day the water in Edison's phosphorus bottle evaporated, it fell on the floor, and ignited the car. The conductor with difficulty extinguished the fire, threw the materials out of the car, and gave Edison a thrashing, so that his newspaper and laboratory came to a sudden end. He continued his experiments in the cellar at home, and carried his printer's material with him for several years.

While running into Detroit he became acquainted with the telegraph operators, and in longing about the office the idea suggested itself to telegraph the newspaper headings to the stations in advance of the train. The effect was to spread the information of the battles then taking place, and greatly increase his sales. The success taught him the value of the telegraph, and he determined to learn the business. He purchased a work on the electric telegraph, and in conjunction with James Ward, one of his assistants, they constructed a telegraph line between their residences in Port Huron. They used common stove-pipe wire insulated with bottles placed on nails driven into trees, and crossed under an exposed road by means of a piece of abandoned cable, captured from the Detroit river. The first magnets used were made with wire wound with rags for insulation, and a piece of spring brass was used for a key. They were somewhat mixed as to the relative value of dynamic and static electricity for telegraph purposes, and the first attempt to generate a current was by means of a couple of cats rubbed vigorously at each end at an appointed time. This effort proved a failure, although they succeeded in getting rid of the cats with lightning-like rapidity. Soon after this experiment, some old telegraph instruments and battery materials were purchased, and a successful short line was inaugurated. This was quite an achievement in those days, although now there are hundreds of such short lines throughout the country.

About two months afterward, as the railroad train was switching some cars on to the side track at Mt. Clements Station, the agent's little boy, two

years old, crept upon the track in front of the approaching cars. Edison, seeing the danger, sprang to the ground, seized the child, and barely saved his life. J. A. McKenzie was the agent and operator, and in gratitude for the act volunteered to assist Edison to learn telegraphy. Thereafter, on reaching the end of his route, Edison would go back by freight train to Mt. Clements, and worked nights to perfect himself in operating. In five months he was sufficiently advanced to secure employment in the telegraph office at Port Huron. The office was in a jewelry store, and Edison had an opportunity to indulge his mechanical inclinations. He worked night and day to improve himself, but resigned in six months because compensation promised for extra work was withheld. His regular salary was \$25 a month.

He next went to Stratford, Canada, as night operator. The operators were required to report "six" every half hour to the Circuit Manager. Edison indulged his ingenuity to a bad purpose by making a wheel with Morse characters cut in the circumference in such a way that when turned it would write the figure six, and sign his office call. This the watchman turned for him while Edison slept.

His stay at this point was brief. One night the dispatcher sent an order to hold a train. Edison repeated back the message before showing it to the conductor. When he ran out for the purpose, the train had pulled off from the side track, and was gone. When the dispatcher was notified, the opposing train was beyond reach. Fortunately the two trains met on a straight track, and no accident happened. The railroad Superintendent sent for Edison, and so frightened him with threats of imprisonment that, without getting his wardrobe, he started for home, and was greatly delighted to reach his native land. He spent a few weeks at Port Huron in study, but operators were in demand, and he obtained a situation at Adrian, Mich. Here he had a small shop and a few tools, where his spare time was used in repairing instruments and making such experiments as he had the means to accomplish. However, the superintendent of telegraph one day pounced upon him in the act of "fighting circuit," and discharged him.

His next situation was in night service at Fort Wayne, and in two months he had improved so as to secure a situation at Indianapolis. Here he invented his first successful automatic repeater, an important achievement for so young and inexperienced an operator.

He practiced nights incessantly, to be able to take press report, was finally given a trial, but finding himself making too many breaks, he rigged two more recording registers, one to receive and one to repeat the embossed writing at slower speed so it could be copied. When this was done he told the sending operator to "rush him" which gave him brief reputation, for the "copy" was so slow in reaching the press that it caused complaint, and he was suspended from the work.

At the end of six months he was transferred to Cincinnati. Here he worked a day wire, but continued to practice nights, and "subbed" for the night men whenever he could get the privilege.

He had been in Cincinnati three months when a delegation of Cleveland operators came down to organize a branch of the Telegraphers' Union, which resulted in the great strike a few years ago. They struck the office in the evening, and the whole force, with one exception, went off on a gigantic spree. Edison came round as usual to practice, and finding the office so nearly deserted, took the press report to the best of his ability, and worked through the night, clearing up business. The following day he was rewarded by an increase of salary from sixty-five to \$105 a month, and was given the Louisville wire, one of the most desirable in the office. Bob Martin, one of the fastest senders in the country, worked the Louisville end, and from the experience here acquired, Edison dates his ability as a first-class operator.

Edison's utter negligence of dress and appearance, his willingness to work at all hours, night or day, his unsatiable thirst for reading, and his enthusiastic attempts to solve what appeared to his companions impossibilities, earned for him the name of "lunatic" or crazy man, which clung to him a number of years. He retained, however, the personal good will of his associates.

In 1864 he went to Memphis and obtained a more remunerative salary. His associates were dissolute, and imposed upon his good nature to such an extent that the work he did was enormous. Abstemious himself almost to stoicism, he freely loaned his money to his companions or expended it in the purchase

of books and apparatus. He made and put into operation his automatic repeater, so that Louisville and New Orleans could work direct. The idea of duplex transmission had taken possession of him, and he was perpetually advocating and experimenting to accomplish it. These efforts were looked upon with disfavor by the management, and in the changes resulting upon the transfer of the lines from the Government to the Telegraph Company, he was dismissed.

Being without money, and having transportation to Decatur only, he walked to Nashville, where Billy Foley, an operator in the same predicament, was found, and they traveled together to Louisville. Edison had only a linen suit, and on arriving at Louisville he found the weather extremely chilly. He hunted up a friend, who loaned him money for his immediate need. Foley's reputation was too bad to obtain a situation himself, but he recommended Edison, who obtained work. For this service Edison supported Foley till he could get a job.

Edison describes the Louisville office at this time as the dirtiest and most free and easy in the business. The common disposition of tobacco quids was to hurl them at the ceiling, where they stuck by the hundred. Rats in great numbers kept the operator company at night. The discipline was lax in all things except the quality and promptness of work. Edison was required to take reports on a line worked from the blind side of a repeater, where he had no chance to break. This required skill, and he attained to a rare perfection by the most careful study of names, markets, and general information. The line was old and in poor condition, being subject to many interruptions and changes. To assist in his work, Edison was in the habit of arranging three sets of instruments, each with a different adjustment, so that, whether the circuit was strong or weak, or no matter how rapid the change, he was able to receive the signals accurately. He remained in Louisville for nearly two years, and then got the South American fever. In connection with Messrs. Keen and Warren, two of his associates, he saved money for the trip, and they started, intending to go via New Orleans. On arriving at the latter place, the vessel upon which they were to ship had fortunately sailed. Edison fell in with a Spaniard who had traveled round the world. He told him of all the countries visited the United States was the best, having the most desirable government, institutions, climate and people. This wholesome advice shook Edison's determination in connection with his disappointment at delay, and he resolved to go home. He went to Port Huron via the Gulf and Atlantic States. After remaining a few weeks, he again got work at Louisville, and returned there. He now began to save his earnings more than ever, and invested them in addition to his library, apparatus, printing-office and shop. He started to publish a work on electricity with his own office, but the task proved too much for his facilities. He went into a most elaborate series of experiments, as was his custom when investigating any subject, to determine the most rapid and best-adapted style of penmanship for an operator's use. He finally fixed upon a slightly back-hand, with regular round characters, isolating the letters from each other, and without shading. This beautiful penmanship he became able to produce at the speed of forty-five words a minute, which is the extreme limit of a Morse operator's ability to transmit. Edison's description of the habits of his associate operators at this time is amusing in the extreme. Often when he went home from his work in the small hours of the morning, he would find three of the boys on his bed with their boots, where they had crawled after an evening's dissipation. He would gently haul them out and deposit them on the floor, while he turned in to sleep. Meanwhile the office was removed to a new building with improved fixtures, and the instruments were fastened to the tables. Orders were issued not to move the instruments. Edison, however, could not desist from taking three sets to connect up, so as to get report correctly, for the line outside had not improved. At one time he had every instrument in the office out and connected together to try an experiment. Beneath the office was a bank, and in the back office an elegant carpet covered the floor. Over this was the battery room, and one night, in trying to abstract some sulphuric acid for experiments, he tipped over the whole carboy. The acid ran through the floor and ceiling, destroying the carpet and doing other damage. This proved the climax of endurance, and Edison was discharged. He went immediately to Cincinnati, and obtained work as "report operator." This was the scene of some of his first achievements. He always had a hankering for machinery, and when on the Grand Trunk Railway, frequented the ma-

chine shops, and learned to run an engine. On one occasion, when the engineer and fireman were exhausted from overwork and fell asleep, he ran a train nearly the entire trip. He unfortunately pumped the engine too full of water, so that it was thrown from the smoke stack, and deluged the engine with filth, much to the discomfiture of the engineer, who had slept while Edison ran the train. In Cincinnati, on his first stay, he made an ingenious small steam-engine, and arranged his first duplex instruments. The instruments were very crude, as he had so little to work with, but the drawings, which still exist, show conclusively that double transmission was possible at a much earlier date than when put into practical use.

His second stay in Cincinnati was very unpopular on account of his continued experiments. He would get excused from duty, and take a bee-line to the Mechanic's Library, where his entire day and evening would be spent reading the most ponderous electrical and scientific works. He remained in Cincinnati only a short time, and returned home.

He had a warm personal friend, M. T. Adams, in the Boston office. An expert was needed to work a heavy New York wire. Several candidates had failed, as the New York end was worked by "York and Erie" operators, who, as a class, had the reputation of writing anything but the "Morse" alphabet. G. F. Milliken, the manager, offered the situation to Edison by telegraph, and he accepted. He started via the Grand Trunk, and the train was snowed in for two days near the bluffs of the St. Lawrence River by a violent storm. The passengers nearly perished with cold and hunger. When all resources for fuel and food were exhausted, a delegation was sent out to hunt for relief. They were gone so long, another expedition was about starting in search of them, when they returned and reported a hotel not far distant where cigars were one cent apiece, whisky three cents a glass, and board fifty cents a day. A shout of relief went up from the crowded cars, and all were soon comfortably housed till the storm was over. Edison finally reached Boston all right. His reception at the telegraph office, and the manner in which he so successfully overcame the prejudices inspired against him by his uncouth appearance, was described at length in THE OPERATOR a few issues ago. Although somewhat exaggerated, the account is in the main correct. The table at which he had been placed was in the centre of the room, for the better enjoyment of his discomfiture. He noticed the arrangement, and says he would have died rather than make a break. He arrived in Boston in 1863, and in the person of Mr. Milliken found the first superior officer who could appreciate his character. Mr. Milliken was an accomplished gentleman, a thorough master of his profession, and an inventor of merit. He made allowance for the gawky and hungry look of his subordinate, and in the secret excitement under which he seemed to labor recognized the fire of genius. Edison's stay in Boston was congenial.

[TO BE CONCLUDED NEXT ISSUE.]

The Proposed Protective Organization.

In considering the subject of "combination" as a means of protecting our interests, the first question that suggests itself is this: Have telegraphers any grievance to complain of? To this question I answer emphatically, yes; and in support of that answer will merely point to the sliding-scale reduction of two years ago; the recent gradation of salaries; juggling with stock-jobbers and ruinous opposition lines, and the steady deterioration of corporate morals, which has resulted within the last decade in displacing from commanding positions generous-hearted men of sterling worth and probity, who thought it their duty as employers to put conscience and benevolence, as well as sagacity and enterprise, into their business; and substituting in their places sharp, shrewd, heartless men, such as the "Vanderbilt men" of the Western Union Board of Directors, and the "Union Pacific" and "Pacific Mail crowd," who so successfully managed and guided the Atlantic and Pacific Company into the "pooling" contract.

These are some of the general grievances to be complained of. They are real grievances, that in the long run work permanent injury and degradation to the ordinary wages class engaged in this business, and prove conclusively the existence of a condition of affairs that needs remedying. The way to a better condition of affairs seems to lie in greater respect for the rights and claims of both employer and employes, and the question that next

forces itself to our attention is how to secure this result.

In my opinion, the best way to accomplish this is by "combination." Of course we have the right to combine for the purpose of protecting and advancing our interests. There is no room for argument on this point, for this is a claim that must be conceded by every just man. Capitalists also have the right to combine; they do combine to form companies, and companies combine to form monopolies. Why should we not also exercise this inalienable right? It would undoubtedly be conducive to peace, and to the mutual understanding of the rights of both parties, if our employers were taught to recognize the fact that two can play at the same game of combination.

Workmen in England have been greatly benefited through the agency of combination. Fifty years of conflict between the two classes there has resulted in lifting workmen of all classes from a condition of slavish degradation to one of comparative industrial independence, and perfect political equality before the laws of the land. Prior to 1824, combination among English workmen was punishable before the common law. In 1869 so much progress had been made that the English Parliament conceded the broad principle of equality of rights for labor before the law, and by suitable legislation recognized the right of workmen to combine to protect their own interests. Courts of arbitration have since been established to examine into and recommend terms of settlement of disputed questions arising between employers and employes.

Some other good results that have followed this changed condition of things in England are these: Nearly all the disputes that now arise are settled by arbitration; workmen of all classes have grown more intelligent, sober and industrious since their freedom has been extended, and legislators look after and take greater interest than formerly in methods of industry, sanitary and educational measures that tend to benefit and improve the working classes.

This brief review of what has been accomplished through the agency of combination in England, convinces me of the expediency of telegraphers making an effort in the same direction. It is useless to hope for any change in our relations with our employers unless we do so, and we are deserving of the fate that now stares us in the face if we do not make an earnest effort to prevent the continuance of the present unfair condition of affairs. Nothing will benefit us so much as successful combination. A good, strong, well-disciplined protective association, organized on the conservative basis of not striking—except as a last resort, after all efforts to secure the reference of grievances to disinterested parties have failed—might accomplish much toward the desired end, without ever resorting to a strike. The bare fact alone of the existence of such an organization would have great potency in developing in the minds of some of our employers rules of just conduct, in the place of rules of conduct purely selfish; for nothing so quickens the sense of justice and equity in selfish men as the consciousness that unjust demands or treatment is likely to be promptly and fearlessly resisted.

In conclusion, I have only to add that it is a humiliating reflection that unless a protective union or something intervenes, the relationship between telegraphers and their employers must remain as at present, one of independence on the side of the employer, and of dependence on the side of the employe, with the former possessing to an appalling degree the power to deal unjustly with the latter; with the terms of copartnership, so far as compensation for services is concerned, left entirely for settlement between the self-interest of employers and the necessities of employes. Having already carried this letter to a greater length than I intended to in a single communication, I will now close it, hoping that what I have written will stimulate thought and action upon the subject among telegraphers. In a subsequent letter I shall endeavor to briefly outline a definite plan of organization, such as I think should be adopted. SENTINEL.

In response to your editorial in THE OPERATOR of April 15th, inviting communications on the subject of a Mutual Protective Society for Operators, I will venture to give my views, although I presume the invitation was intended more particularly for Western Union operators than for others, in which case the editoria waste basket is doubtless in a convenient position, and my communication will probably find plenty of good company. Belonging to that class of fortunate (?) individuals called railroad operators, whose salaries have at

last, it is to be devoutly hoped, been fixed upon a solid basis, from the simple fact that the majority of us are already in the position of the colored woman's son Jonas, and have been subjected to the flaying process to such an extent that our officials cannot hope to find even a solitary \$5 on which to hang another reduction or a sliding scale, I think I can venture to assert, without fear of contradiction, that we will heartily welcome, and gladly help along to the best of our ability, any movement tending to the benefit of operators as a class, knowing that our interests individually depend upon our prosperity collectively. In case a movement looking in this direction is resolved upon, do not, I beg of you, commit the fatal mistake which was made by the Telegraphers' League, where "many were called but few chosen," metaphorically speaking; for if I read the history of that effort among our brethren of the W. U. Co. aright, they overlooked almost entirely the, perhaps, humbler railroad operators, and, as the sequel showed, this error resulted in their defeat, although to my mind little to the credit of the railroad operators of that day. In the face of facts it is scarcely egotistical to say that we are now more than ever an important factor in the case, and as we are all, more or less, suffering from the short-sighted, parsimonious policy of mammoth corporations, let us make common cause together and take a stand which shall secure to us a more liberal and generous treatment in the future. I am glad to have the opportunity of expressing my views on that subject, for I have long felt some action was necessary, and particularly so at the present time, when "plug" factories, both public and private, are flourishing on every hand, when many operators and agents, too lazy to honestly perform the work for which they are employed, or foolishly thinking that they can better their condition, at the expense of the general welfare, by eking out their (heaven knows in many cases) too scanty salaries in the manufacture of two or three plugs every year, and when short-sighted superintendents can be found who will make the salaries paid such plumes the standard for all their operators good or bad, reliable or unreliable. I for one think it high time that operators, as a class, awoke to a realizing sense of the situation, for the remedy rests with us. Be assured of this, and let us rise in our might and demand as our right what we have long prayed for as a boon, and let us show these soulless corporations that the hour of their tyranny is forever gone. A mutual banding together, with concerted action and resolute determination, will accomplish this result. I hope that this idea suggested by you in the editorial columns will be thoroughly discussed until it shall germinate into some organization which will guarantee to us the rights that long and faithful service deserves. "United we stand, divided we fall."

MANFRED.

BRAIDWOOD, Ill., April 17th.

For the love of heaven go on with your good work. Don't flinch or waver, but stand right up. "Shout the battle cry of freedom" through the length and breadth of the land, and God will give you your reward, though we poor, down trodden operators may not be able to do it. I am in favor of a protective organization. Let us have it by all means. The W. U. equalization doesn't affect me. I am a poor railroad operator, but I have felt the bitterness of supporting a wife and children on \$60, and then on \$40. Let us set a time, and hold a convention, say at Cincinnati, about July 15th, to perfect an organization. It has always been a wonder to me why this has not been done before. We have God and justice on our side, and by their help are bound to win. We have a powerful organization to fight, and must use every effort in our power; but if we throw our whole souls into the project, with the help of God we shall yet be victorious. Some may prefer working for nothing, to trying to assert their rights, but as for me I will go with but one meal a day in order to furnish my share of any money that may be needed to carry out our plans.

MORE ANON.

Where, Oh where does this gradation come in— if it comes in at all— on the upward tendency? We underpaid western operators would like to receive some of the benefits therefrom. We think it is high time that something be done. Five years ago our salaries were poor enough—now what are they? Forty or fifty dollars a month. Even the brakemen of the west receive more compensation for their services, and it takes only a few weeks to become a proficient in the breaking vocation. The operators must do something, or else be crushed under the golden heel of this meanest monopoly of

the United States; and I say with Marco Bozzaris to his storied brave:

Strike! till the monopoly has all it desires,
Strike! till the grasping ring expires,
Strike! till our cause has what it requires
More pay and less hours.

BOONE.

Jean.

It was a dark, lonely road, and the wind sighed and moaned plaintively among the trees. Not a pleasant spot at this hour for a trysting place, yet a couple seemed to have chosen it for a meeting. The moon came partially out from the obscuring clouds, and shone for a moment upon a girl and her lover. The former was sobbing bitterly, and pleading with her companion in the most piteous manner.

"Jean, Jean, do be still and reasonable, my darling," and the young man drew the girl close to him, "trust me, and all will yet be well. I know I am weak and pleasure-loving, my own, but one cannot change his nature." His voice, so low and gentle, was in strong contrast with her high, excited tones, but the girl retreated from him, and throwing her arms tightly around her head, said, bitterly:

"No, I know it is of no use. Why do I care? Why do I try? It is always in vain. And yet, ah Joe! why are you not truer to yourself and me." With a sudden impulse she stretched out her hands to him, while her voice changed, and sank lower with the intensity of feeling. "Without a word he drew her hand within his arm, and the two walked up the road until they came to a small house standing alone. There she parted from him, and went in. He stood irresolute for a moment, and then retraced his steps.

The instruments were clicking busily, and the night men had come on, and taken their positions at their respective wires. After a while business "let up," as it is called, and one after another leaned back in his chair to indulge in a general chat. There is a more friendly good fellowship among telegraph operators than is to be found among almost any other fraternity. It is like a great brotherhood. Being in such constant communication, each seems to have a sympathetic, kindred feeling for the other.

"So Joe is going to be put on at night to work the press wire?"

All eyes were turned upon the speaker inquiringly, and a buzz of questions and comments followed. "How will he like that?" asked one; "not much chance for those little larks." "No," said another, "that festive youth will have to put in his time rather differently, especially on that wire." "Where the boy gets the money to be such a nob is a mystery to me," continued a third. "But here he comes now," and the "Joe" in question walked in and took his seat among them. A handsome, slender young man, looking younger than he really was, very much better dressed than his companions, but not at all disagreeably conscious of it; quietly selfish, certainly willing to take all the world would give him without much effort on his part, but a genial, sweet-tempered fellow, and a general favorite among the "boys." There was a little shadow on his face though to-night, as they began to joke him on that "night trick," and he rather emphasized his opinion of tying a man down in that manner, just in the hours when he wanted to enjoy himself. The cloud soon passed, however, and he finally said good-night, smiling and placid as usual.

Jean Duprez sat for long hours by her fire, looking at the logs of wood which for a time would burn brightly, and then smoulder, until she gave them a turn, and stared the flames roaring up the chimney again; they lighted up the room, however, and showed what a cosy, homelike place it was— everything very plain and inexpensive, but kept in perfect neatness and order. With a naturally artistic taste she had adorned the room with green, trailing vines and pink, blushing roses, now nestling asleep in their soft waxen beds, and fragrant geraniums that bent their stalks toward the window, and instinctively turned their green leaves outward to the light. Many little articles of beauty gave evidence of skillful, womanly fingers; only two rooms, but Jean had made much of them. As she sat musing, a cricket chirped on the hearth, and kept time with her thoughts. A tall, black-eyed French girl, not handsome, nor yet ugly; a face full of determination and power. To look at just the eyes, nose and forehead, one would call it hard and defiant; but the mouth—a sweet, womanly mouth—contradicted it, and the rare smile when it came softened the whole. A very, plain, dark dress, clean, but showing visible signs of wear, did not do much to make

Jean beautiful, but such as it was she patched and wore it day after day. Jean also was a telegraph operator. Her father, whom she used to support, was dead, and she had a fair salary, no one to provide for but herself, and why she did not dress better was a constant wonderment. But she took no one into her confidence.

"Poor Joe," she thought, tenderly; "perhaps I am hard on the boy. If he wants money, why should he not have mine? No, it is not that I care for. He is welcome to all I can make, and more too, if I had it to give him. But it is hard to lead this lonely, isolated life, not daring to have friends for fear of their finding out, and yet seeing him so seldom. Ah! it is hard to sit alone, quite alone," she said, with a deep sigh. Then, impatient with even a thought against him, she rose and pushed back her chair.

"When one loves one is willing to bear much," thought Jean. Grand in her perfect self-sacrifice, she was content with giving all, and receiving little.

Joe worked well and steadily for two weeks on the press wire, while Jean received industriously, and with scarce a break during the day. The manager was proud of Jean; she attended so well to her duties, and made such a clear, legible copy.

Late one afternoon, just as she was leaving the office, a boy handed her a note. She turned rather white as she read it. It was only a line, asking her to take his place that night as he would not be there; not a word of explanation as to where he was, or when he would return.

The night men had taken their places, and were looking around for Joe, when Jean Duprez came forward, and sat down at the wire. "Joe is sick," she said, resolutely, "and I will take his place." The boys stared, but warned by her expression, did not say anything. They knew she was a good operator, far ahead of any woman in the office, but they expected to see her fail on that wire.

But Jean Duprez did not fail. She answered promptly, and copied as evenly and clearly as if on her own wire.

The next night came, and Joe was still absent. One of the day men offered to take the wire, but Jean declined. She kept right on. The third night she looked white and ill, but got through the night. In the morning news came of a collision, and Joe was one of the passengers. They heard he was dead, and told her so. She said nothing for a moment, but there was a look in her eyes that startled them. "What was Joe to you?" asked a girl near her. "What was Joe to me?" she replied, her voice unnaturally quiet: "Joe was my husband," and she went out of the office, and dropped down in a swoon near her home. There some one found her, and carried her in. She was very ill, indeed, lying for awhile between life and death, but she had a faithful watcher.

Joe had not been killed, or even hurt, and came back to hear the story of Jean's heroism. Shocked and repentant, he acknowledged the truth, and changed from that day.

Jean recovered, and they are a happy, satisfied couple. Jean's home shines brighter than ever, and there is always a welcome for the "boys," who can find no pleasanter place in town in which to spend their evenings.

The telephone is ridiculously simple in construction, and all who view its interior economy wonder that it was not discovered years ago. There is no battery, acid, copper or zinc about the little instrument. Yet simple as this wonderful far-speaker is, the still more wonderful phonograph is still more simple. There is not even the telephonic magnet about the phonograph. But the greatest wonder of all is the earphone, that will speak so as to be heard anywhere within a radius of five miles of surface. The telephone has become an old story. The phonograph is the most simple of the trio. A small pipe leads from a steam boiler to a common steam whistle. A mouth-piece is fastened into the steam pipe, and in this mouth-piece is a vibrating disc, similar to that in the telephone or phonograph. This disc is fastened to a valve which opens or shuts, according to the vibrations of the disc. The speaker puts his mouth to the speaking tube, turns on steam, says what he has to say into the tube, and the fluttering of the valve gives voice to the steam jet, which can be heard as far as the sound of the whistle will reach.

The English war vessels Monarch, Alexandra, and Temeraire are to be provided with an electric light capable of illuminating the sea around them, so that the approach of torpedoes may be detected.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

May 15th, 1878.

THE cable steamer Faraday arrived at this port last week.

Western Union stock is quoted at 81½, and A. & P. at 22½.

MR. W. J. BARRON, of the Associated Press, advertises in to-day's issue, as a preventative of telegraphers' paralysis, a flexible key-knob, and also an adjustable elastic cover, or cushion, to fit over the ordinary key-knob at present in use. They are recommended by many eminent telegraphers, and, being simple and cheap, deserve at least a fair trial.

WE have received a copy of the "Telegraph Chart of the World," showing the cables by which the different countries are connected, as well as the principal land lines in each. This is the most complete map of the kind yet issued, and is corrected to date of publication. The price is: Plain, on rollers, \$1.00; colored, ditto, \$1.50; colored, in book form, \$2.00. A discount is made to those acting as agents. The maps are for sale by Mr. G. A. Stimpson, Western Union Building, New York, and are an excellent investment for operators.

"A LITTLE LAMB" sends us a fable for publication, but omits appending thereto her name and address. An operator in this city also favors us with the information that one of the main office men is like a policeman in never being around when wanted, but neutralizes the effect by a similar neglect. Will contributors in future please remember to sign their correct name and address to the articles they send, not for publication, but as a guarantee of good faith, and for the information of the editor. Many personals and other items are not used by reason of this omission.

THE Western Union Telegraph Company having applied to the Commissioner of Public Works, of the city of New York, for a permit to open certain streets for the purpose of laying pneumatic tubes and subterranean wires to the principal newspaper offices, etc., the matter was referred to Corporation Counsel, William C. Whitney, for an opinion as to the rights of the company in the premises. In an opinion of some length, Mr. Whitney fully considers the legal question presented, concluding as follows: "I am of the opinion that, under the general laws of the State, and independent of any special authority from the Common Council, the telegraph company is entitled to the permit requested, subject only to such reasonable requirements as you may think it best to impose as to the time and manner of taking up and restoring the pavements."

Shall We Have a Protective Organization?

WE give in this issue the opinions of four correspondents, selected from a number received, on the subject of a protective organization for telegraphers, as suggested editorially in the issue of April 15th. All those heard from are unanimous in its favor. This is a subject of the utmost importance to our readers. The Western Union Telegraph Company, strong in the strength supplied by these very operators, has wantonly reduced their already, in all conscience, miserable enough compensation, until the question arises, where these sliding scales, gradations, and similar sugar-coated names for general reduction are to end.

Men who a few years ago received a salary of a hundred dollars and upward a month, are now compelled to work in many cases for one-half that amount; and there are operators, and good ones, too, whose stipend is but thirty, twenty-five, and sometimes even as low as twenty dollars a month. Twenty dollars a month! Truly a munificent sum out of which to pay board, washing, clothing and other bills, and be able to lay by something for a rainy day!

The Executive Committee, ever solicitous of the welfare of the "beloved employes," decided that salaries should be adjusted, equalized, graded. Of course, this grading, according to the Committee, was to be "for the real and permanent interests of the employes." There could be no question about that. Everybody knows that the Western Union is a philanthropic organization, whose chief end and aim is to benefit its dear employes, and do what it can to render them happy.

Now, salary grading, properly so-called, we, and doubtless most of our readers, would heartily welcome. Every year a man, especially a young man, continues at the business, his services become more valuable to his employers. No one can spend twelve months in a telegraph office without becoming more proficient as a telegrapher, and better able to avoid delays and errors, beside adding very materially to his stock of general information. This fact is recognized in Europe, especially in England, where operators, unless of very bad character, receive an increase of salary at the end of each year. When they serve a certain number of years, moreover, or, in many cases, when they are compelled to resign on account of sickness, a life pension is granted them, whereby they can spend their declining years free from the harrassing cares inseparable from earning a livelihood.

But *per contra*, how does the Western Union treat the operators who remain faithfully in its employ? Instead of giving them an annual or even an occasional increase of compensation, it positively reduces their salaries under the thin guise of grading. Ostensibly, this gradation was the reduction of one operator's salary, with a proportionate increase of compensation to somebody else. But if those underpaid operators whose salaries have been increased will hold up their hand, it will be found that they are outnumbered fully ten to one by those whose salaries have been reduced, and that the amount added to theirs, bears no adequate proportion to that taken off the others. When Western Union operators are sick, too, although their expenses are very much increased, their pay immediately stops, and when they become old and infirm they are dis-

charged, and somebody else put in their place. The proper way to grade salaries, and, in our opinion, the only fair way, would be to reduce those of the overpaid officers, and increase those of the underpaid operators. Nineteen thousand dollars a year is entirely too much for any one man, when so many are glad to toil for less than one-third of nineteen hundred. Then, again, there are many little sinecures where the friend of some official is paid a salary of two or three hundred dollars a month for doing nothing, or next to nothing. Economy, if we may be permitted to make the remark, might be practiced much more advantageously here than among the hard-working and poorly paid operators. If the Executive Committee will look into this matter, they can easily satisfy themselves on the subject.

While the immediate effect of the grading scheme may be to slightly increase the net earnings of the company, we seriously question whether it will ultimately prove much of a benefit to the stockholders. After one of the most terrible conflicts in which Napoleon had ever engaged, and in which he had been victorious, but at the expense of most awful carnage and destruction of his magnificent forces—the chivalry and pride of France—one of his generals went to the great warrior, and said: "Sire, we have gained the victory!" "Yes," thoughtfully answered the Emperor, "another such victory, and we are ruined!"

Grinding the salaries of employes down to the lowest possible notch does not pay in the long run. On the faithful performance of duty on the part of these very men depends the success of the corporation they serve, and the consequent profits of the stockholders. The recognition of faithful, conscientious, and intelligent service by a judicious increase of salary, will stimulate one to still greater exertions in behalf of his employer, while the knowledge that one is regarded as a mere machine, whose services are to be secured at the smallest possible wages, and dispensed with the moment that some one else can be obtained to take his place a few dollars a month less, will render a man utterly careless of his employer's interests. We doubt, therefore, whether the Western Union will not lose more by gradation than it will gain.

The grading will, however, prove a blessing to the fraternity if as a consequence of it telegraphers are only brought to see how absolutely they are in the hands of their employers, and will organize themselves into a combination for their own protection. We do not advocate anything looking toward a strike, except as the very last resort, but merely an organization for mutual protection. If operators would only come together, city and way, commercial and railroad, male and female, first-class and plug, and stand up together for their rights as one man, we should hear very little of sliding scales and gradations, but so long as operators are divided, and will not pull together, just so long will reductions continue. We would draw attention to the communications on this subject in another part of this paper, particularly to the able argument of Sentinel, and would be glad to hear from many more in regard to the matter. In fact, to facilitate the organization of such an association, should one be deemed advisable, we beg now to put the question to a vote, and will be glad to receive the vote, *pro or con*, not only of each of our readers, but of every telegrapher in the country, of either

sex, interested in the matter. The votes can be addressed to us. Of course we want the real name and address—it can be depended upon that we shall make no improper use of the information—and the person voting can briefly give his views in support of whichever side of the case he advocates; or merely say whether he votes for or against the organization, just as he pleases. We shall expect to hear from *everybody*. Every operator in the country is interested in this matter. All the telegraphers in each office can mail their votes at the same time to save postage, and where an operator is not likely to see this, perhaps some of our readers can give us his views on the subject.

The Western Union Surplus.

A memorial was circulated for signatures on Wall Street last week, as coming from the stockholders of the Western Union Telegraph Company, addressed to "William H. Vanderbilt, Hon. Edwin D. Morgan, and others, Executive Committee of said Company." The memorial says that the signers, holders of stock in the Western Union company, many of them as permanent investors, beg respectfully to state that the surplus of the company, as appears by the last annual report, (including \$7,285,200 of the stock of the company), amounts to upward of \$16,000,000, or about 50 per cent on the outstanding stock. And they further state that the whole of this large surplus has arisen from the net earnings of the company, under the implied assurance that at the proper time, in some form, this surplus should be capitalized, and divided ratably among the shareholders. The memorialists believe—inasmuch as the control of the Atlantic and Pacific Telegraph Company, the only rival to the Western Union, is now owned by it, thus wiping out all competition, and thereby both increasing the gross earnings, and decreasing the expenses of the company—that the time has arrived when it would be safe to divide among the stockholders that portion of the large surplus represented by its own stock held as an asset in the Treasury. They believe the present condition and future prospects of the company fully justify this division, and therefore earnestly request that the memorial may receive early and favorable consideration at the hands of the Executive Committee.

Of the amount of stock named above (\$7,285,200), 12,500 shares, equal to \$1,250,000, were paid out subsequent to the last annual report in furtherance of the purchase of the Atlantic and Pacific Telegraph Company's stock, leaving only \$6,035,200 to distribute. It was claimed by many that the memorial was being extensively signed, but this could not be verified. Other stories were afloat to the effect that the late President Orton was in favor of the measure, and was long of 1,200 shares of Western Union stock on a falling market at the time of his death, and that the Executive Committee and Board of Directors had been considering the subject, and were prepared to report favorably. Dr. Green, acting President, said that nothing of the kind had ever been contemplated by the committee, the board, or any of the officers, and that he knew nothing about it. He had not received a copy of the circular, and did not believe the document was authorized. Between three and four years ago it was in contemplation to cancel the surplus stock, but nothing came of it, and since that time it was never

brought up or asked for by the stockholders. Gen. Stager, Vice-President, said that there was no evidence that the memorial emanated from any stockholder. He was inclined to think that it was the work of brokers for stockjobbing purposes. The stock was favorably affected by the reports.

Mr. Orton's Last Words.

Is it true that Orton's last words were: "Grade the salaries five per cent. on sliding scale?" Many operators anxious to know.

April 30th, 1878.

FLORIDA.

This question is almost too preposterous to require an answer. When our correspondent Florida, and the "many operators" who are so "anxious to know," come to utter their last words—come to find themselves face to face with Death—we hope it will be a long time yet, but when they do, they will find that the things of this little world will sink into so contemptible insignificance, in view of the far weightier and more important matters of the world beyond, that they will find but little time to devote to sliding scales, gradations, copper-plate copies, and the like. We were not at Mr. Orton's bedside when he died, but gave in last issue what are reported as his last words. As he was quite unconscious from the beginning of the attack until his death, our Florida friends can rest assured that no mention was made of any reduction of salaries. On the contrary, as he steadily opposed every effort of the Executive Committee in that direction—more so, we fear, than will his successor, who, in the very nature of things, cannot feel so strong in his position, or afford to be as independent as did Mr. Orton, who well knew how almost impossible it was to get anybody else to properly take his place—we think they may feel reasonably certain that had Mr. Orton retained consciousness, and had he had ample time to settle up his worldly affairs, and give definite instructions as to his wishes in regard to the employees of the company, he would have been much more likely to have advised the abolition of sliding scales and gradations, than further reductions. The fact of the matter is, that few telegraphers realize what an almost irreparable loss they have sustained in the death of Mr. Orton. We hope, of course, that we may prove to be mistaken, but in our opinion, it is extremely doubtful whether the Western Union will ever have a president who will do as much for his operators as Mr. Orton has done.

THE annual meeting of the stockholders of the Atlantic and Pacific Telegraph Company was held in this city May 8th. The largest vote ever cast was polled, being 107,843 shares out of 140,000. The Western Union Company cast 71,000. The result was the complete defeat of the Jay Gould clique, and the election of the following Board of Directors, a majority of whom are identified with William H. Vanderbilt and the Western Union Directory: Edwin D. Morgan, Augustus Schell, Hamilton McK. Twombly, Norvin Green, James H. Banker, Chauncey M. Depew, R. H. Rochester, Harrison Durkee, Thomas T. Eckert, William J. Syms, John H. Mortimer, George G. Sampson, Sidney Dillon, Elisha Atkins, and Henry M. Tabor. At a meeting of the Board on the following day Thomas T. Eckert was elected President; Hamilton McK. Twombly, Vice-President; A. B. Chandler, Secretary and Treasurer;

Thomas T. Eckert, H. McK. Twombly, Norvin Green, Edwin D. Morgan, Augustus Schell, William J. Syms, and John H. Mortimer, members of the Executive Committee for the ensuing year. The Annual Report of the President is in the hands of the Executive Committee, and has not yet been published.

SEVERAL of the "bucket-shop" exchanges being compelled to vacate on the first of May the premises they have heretofore occupied, recently applied to the Gold and Stock Telegraph Company to place instruments in new offices which they proposed to hire. The company refused on the ground that their contract applies only to the premises about to be vacated, and that they are not bound to supply other offices. The bucket-shop people alluded to have consequently been compelled to give up business. It will be remembered that the Gold and Stock was notified by the members of the Stock Exchange to withdraw their indicators from these places, under penalty of having its reporters excluded from the floor of the Exchange.

THE suit brought by Elias C. Benedict to set aside the pooling arrangement between the Western Union and Atlantic & Pacific Telegraph Companies, as already fully reported in THE OPERATOR, was dismissed by Judge Donohue, in Supreme Court Chambers, May 1st. On the 7th inst. the case was again brought to trial before Judge Van Brunt, in the Supreme Court, Special Term, Mr. Benedict seeming determined to either break the pooling contract, or himself in the attempt. No facts in addition to those already published in THE OPERATOR appeared in the testimony thus far given. The Judge took the papers and reserved his decision.

Themes for the Thoughtful.

Heaven is harmony.

Love is the fulfilling of the law.

As a man thinketh in his heart so is he.

Heaven is a place of rest at the close of earth's stormy day.

One secret of happiness is discovering beauty everywhere.

Charity is the rarest as it is the most attractive trait of Christian character.

Those women are to be pitied who pass their lives between the world and the theatre; poor souls who have only fiction as a relief from falsehood.

A witty man finds it difficult upon occasion to be dull like everybody else, and so usually contrives to be stupider than anybody else.

It is above all in love that a feast is not as good as enough.

The highest mark of esteem a woman can give to a man is to ask his friendship, and the most signal proof of her indifference is to offer him hers.

No great man or woman has ever been reared to great usefulness and lasting distinction, who was unschooled by adversity. Noble deeds are never done in the calm sunshine of summer's light.

A great poet or painter has usually a life of suffering, for great thoughts and capabilities born of the ideal and beautiful come only through pain.

To bear injuries in all meekness, to be silent under abuse, to resent not, but commit all to Him who judgeth righteously, is no evidence of weakness, but rather of power.

The rainbow is beautiful; but without a storm, without a passing cloud, without descending rain-drops, it does not appear. It comes after darkness and gloom, and the contrast makes its light the more charming and attractive.

The Phonograph.

(She, pensively turning the Phonograph. He scowling over the weekly bills.)

(Phonograph in his voice.)

"In some far east in life's distresses,
There shall our days in bliss supreme be spent,
For, yet most rich, if wealth be fond caresses."
(He.) *Are you aware its overdue—that rent?*

Phonograph—

"We'll live on honey gathered from rare flowers
By dainty bees—fit food for you, my sweet,
Our drink, the dew-drop of the midnight hours
From rosebuds drained."
(He.) *"Infernal bill for meat!"*

Phonograph—

"And, darling, then for me no purer pleasure,
With gems I'll deck that fairy form of thine,
With fabrics rich and precious beyond measure."
(He.) *Outrageous waste! Spring things—too, ninety-nine!"*

Phonograph—

"Only as twin—our love shall have no sharer;
You to command, and I, your slave, that's all.
For you but joy; of cares myself the bearer."
(He.) *"Do go up stairs—the brats begun to brawl!"*
—New York Evening Post

A Lineman's Poetical Report.

Happening to meet up in this beautiful mountain city an "old liner," who is well known to many operators for his geniality and love of a joke, I have prevailed upon him to furnish a copy of "A Lineman's Report," for publication, as well as a brief history of the paper.

The "Report" was written by Mr. Edwin D. Eve, the operator in the Magnetic Telegraph office at Fredericksburg, Virginia, and was forwarded by the lamented Superintendent James R. Dowell deceased, to the Hon. Amos Kendall, Ex-Postmaster General, and, at the time President of the Magnetic Telegraph Company.

The lineman, Mr. John W. Creighton, applied to Mr. Eve to write his report for him. Mr. E. wrote two—one genuine, and the other, the subjoined rhythmical production. Mr. Dowell found the rhyming copy, and in a spirit of fun forwarded it to Mr. Kendall at Washington. The report reads as follows:

FREDERICKSBURG, Va., 18—
JAMES R. DOWELL, SEPT. DEAR SIR:
I started out on yesterday.
And got a mile upon the way;
I found three posts completely down—
The glasses from the brackets thrown,
The wire broken twice, or thrice,
And nought had I wherewith to splice
The same, else had I sooner come
To greet my little ones at home.

Oh, "Home, sweet home!" there is no place
On Earth's broad bounds where I can trace
A dearer, brighter, Heavenlier spot,
Than where my good wife boils the pot;
But to proceed about the line—
I spliced it with a bit of twine,
But when to test, I tried to work it,
I found I did not have a circuit.
I then returned to "Fr" station
In a state of mental desperation,
Procured the wire that I wanted,
And on my outward journey jaunted,
After dint of much vexation,
And copious streams of perspiration,
The whole affair, Dear Sir, was done,
And I returned to-day at once,
Respectfully Yours, J. W. Creighton.

A very short time had elapsed after the transmission of this novel "report" when Mr. Kendall sent the following dispatch in return;

WASHINGTON, D. C., 18—
JNO. W. CREIGHTON, Fredericksburg,
You will in future send all communications to this department in prose.
(Signed) A. KENDALL, President.

The affair was now becoming what Mr. Eve termed a "complicated mix," but he determined that the lineman should not suffer for his idle pastime. With a self-allegation that was truly remarkable, he immediately sent the following message to headquarters.

HON. A. KENDALL, President:

The report forwarded you by Mr. Dowell was not written by Mr. Creighton. It was the work of a mischievous young man in this office.

(Signed) EDWIN D. EVE, Operator.
Mr. Kendall entered fully into the spirit of the joke, and seemed to enjoy it as much as the youngest operator in "W" office, and for a long time

"Creighton's Report" was an amusing topic among the operatic craft. Messrs. Eve and Creighton have been frequently applied to for copies of the above report, and as it has never been published, I thought it would interest many of your readers to send it to THE OPERATOR, with a brief account of its origin.

Mr. Eve is at present associate editor of the daily *Alleghenian* and *Times* of this city. He has gained an enviable reputation as a newspaper man, and a writer of prose and verse. He is deservedly popular here, has a warm heart, and a kindly feeling toward operators generally, beside a rich store of telegraph anecdotes when he meets "one of the boys."

—EYASB ROTAREPO.
CUMBERLAND, MD., April, 1878.

Swindling Teleragph Colleges.

The following persons advertise for students to learn telegraphy, to whom they offer very rosy promises of small salaries while learning, earnings of from \$40 to \$100 a month, and situations free: R. Valentine, Janesville, Wis., W. Tel. Institute, Sedalia, Mo.; C. Brenon, Topeka, Kansas; J. J. Hellehan, Boston, and a party by the villainous name of Bowersock, of Baltimore. Every operator should do all he can to break up these colleges, which are ruining the business and keeping salaries down. Brenon only secured one lady pupil and \$10 in Topeka, and soon cleared out, leaving boarding bills and everything else unsettled. To a letter of inquiry from a Boston operator, copied by a lady, Hellehan sends the following scholarly reply, which we give *verbatim*:

To Miss ————,
Yours at hand—Our terms of instructing are as follows on Term of 3 Months \$35 \$10 on entering and \$10 per Month thereafterwards until the full amount is Paid—We will Guarantee to teach you in a first class manner teaching you in everything Connected with operating part of the Business—The average time it takes to learn is from 3 to 4 Months but there will be no extra Charge for any time over 3 Months—The Salaries Lady Operators Command are from \$30 to \$70 per Month and in Some Cases \$60 per month—This is the oldest Institution of the Kind in N. E. and nearly all of our operators are employed in different parts of New England—We have now open 2 More Vacancies and I will hold one of them until I hear from you at once. Yours Respectfully

J. J. HELLEHAN Manager
Boston Telegraph Institute 230 Washington St.

Referring to the subject of teaching telegraphy in colleges, the principal of Duff's Commercial College a few years ago wrote to the editor of the *Pittsburgh Chronicle* as follows: We have so frequently to reply to the inquiry, "Do you teach telegraphing?" that we desire to state through your columns that we do not. Knowing nothing of the business ourselves, with a view to engaging in it, we made inquiry at points where it has been taught in colleges for several years, to ascertain how far they have succeeded in making competent operators. Our correspondent in New York inquired of the most extensive telegraph companies there, if they had employed any of the college educated operators. They replied, "We have tried them, but have never found any of them competent." At the P. C. R. R. Co's office, in Philadelphia, the manager told our correspondent that a number of the college taught operators had been tried in their office, but none of them could either receive or send a message. At another office, the manager (who had sixteen years experience in the business) stated that numbers of applicants for employ came from the colleges, but they were all incompetent. An intimate friend of his had his son educated in operating in one of them, but upon trial in the office he could do nothing. This manager said it would take from six to twelve months to learn the business. He doubts if it can be successfully taught in schools, giving reasons which I cannot detail, not understanding the operator's technicalities. From the above information our friends and patrons will understand why we do not, like our contemporaries, undertake to teach them telegraphing in from two, to three months, and guarantee employment to all who qualify themselves to operate. When we learn that competent operators can be made in schools we may engage in the business—not before. In the meantime we shall continue to give our undivided attention to business that we understand—making competent accountants.

In Savannah the sender of a telegram pays to the city ten cents tax on every message.

Washington Notes.

Quite a delegation of visitors called upon us last week, including Mr. A. G. Davis of Chattanooga, Messrs. Garwood & Gill of Philadelphia, and Frank Jones from New York. It is whispered around that Frank is after a Government position. C. C. Brown, of this office, was married on the sixteenth instant, to one of Wilmington's fair daughters. It is such an uncommon occurrence to see McAuthur in any way hilarious, that we were agreeably surprised one morning last week as he waltzed into the office on tiptoe with face all aglow with delight, and his mouth stretched from ear to ear. He seemed to walk on air. On being questioned as to the cause of this unusual levity, his reply was reduced to two words: "A girl." Mr. H. F. Lines, of this office, copied with a steel pen the Declaration of Independence, including the signatures, on about three-quarters of a postal card, neatly executed and perfectly legible. Who can beat it? Lines is a splendid penman, a strictly first-class operator, and bears a striking resemblance to the Secretary of the Interior. Minor Davis, a victim of the A. & P. reduction, is working here temporarily during Diven's absence. Minor is a capital fellow, a fine operator, and deserves steady employment. The new office dilemma is settled at last. It will be located in the Cochran building, corner of Fifteenth and F streets. Preparations are being made to move on or before the first of June. It is safe to assume that it will be an improvement on our present office. Will give a description of it later. No doubt there will be a grand rush for tables facing the Treasury Department, as there are great attractions in that vicinity. The sentiments expressed here in regard to the late gradation (or, to use a more appropriate phrase, degradation) of salaries are decidedly emphatic in denouncing the policy pursued by the company toward its employees. Neither long service nor ability has been recognized in what is termed "equalization." This office has not suffered as badly as some others, but nevertheless we have just cause for complaint. The largest single reduction made was \$5.50. Quite a number had their multiple—as it is called—clipped off, which ranged from fifty cents to three dollars per month. And a few were increased. The first was a "sliding scale," and now it is "gradation." What sickly appellation will they adopt for the next reduction? The suit of the Western Union vs. the Pensacola Telegraph Company in the U. S. Supreme Court was recently decided in favor of the former. By the charter of the Pensacola Telegraph Company from the State Legislature of Florida, a monopoly of the telegraph business in that State was claimed. The Western Union claimed the right to construct and operate lines under the general telegraph law of Congress, and the latter claim was sustained. On the 15th instant Senator Jones, of Florida, introduced a bill authorizing railroad companies to construct and maintain telegraph lines for commercial purposes, and to secure to the government the use of the same should it desire to purchase them any time five years after the passage of the bill for postal, military, and other purposes. The bill was referred to the Committee on Railroads. Last week Mr. Edison appeared before the National Academy of Science then in session at the Smithsonian Institution in this city, and exhibited his phonograph and improved telephone. Vertebræ, crustacæ, ologies, etc., were laid aside, and for a hour or more the learned members of this body were filled with delight and astonishment at the antics of this great wonder. The Professor, as the papers call him, was the lion of the day, and received great attention at the hands of the assembled wisdom and science.

CULATER.

A LONG WAY AROUND THE WORLD.—The telegraphic message which Courtney, the Auburn, N. Y., oarsman, sent to Trickett in Australia, accepting the latter's challenge for a £1,000 race, cost \$3.42 per word. After leaving the Auburn office of the W. U. Telegraph Company, the message went to New York, thence to Heart's Content, N. F., the cable end, thence Valencia, on the coast of Ireland, thence to London, then through Germany, Russia, Siberia, thence to Wladivodstock, a point on the coast of Manchuria, thence through Japan Sea to Nagasaki, on one the Japan Islands, through the Yellow Sea, to Shanghai, China, thence down the coast of China through China Sea to Taigon, Siam, to Singapore, Malay, thence to Batavia on the coast Java, thence to St. Darwin, on the northern coast to Australia, and lastly to Sydney.

The Verdant 4th District.

Among so many complaints it must be refreshing to hear of one praiseworthy official. Such a man have we in our district superintendent, G. W. Gates. Always gentlemanly and kind, we are satisfied that if he had his own way the boys would get their just deserts. In his clerk, H. C. Sherman, he has an earnest and energetic helper, and one whom all respect. Although a little rusty now, he was once a first-class operator. Edward C. Ranno, superintendent of repairs for this district, is now at his home in Leicester, Vt., suffering from our common enemy—consumption—with very little hope of recovery. This is sad news for all, as he is universally loved and respected. Mr. Gates and Mr. Sherman have recently visited him and report that he is failing gradually. Everybody knows Jed Landon, and if you can find a better man to string a wire, open an office, or help on a rush of business, show him up. Magiff is manager at St. Albans, Vt., and also general train dispatcher. Cummings, Welch, McCambridge, Pierce, and Randall, division train dispatchers, are A. No. 1. Charley Bingham, as W. U. man, has charge of Boston and New York wires. Miss Mattie A. Dawley cares for Waterbury, Vt. When telephones crowd relays out of the way we shall get music from there. Miss Quinn, at Randolph, Vt., is supremely happy when a train arrives there. She can always be seen at the window, and—well, the conductors always stop longer there than elsewhere. Billy Hantoon is at White River Junction. Dutton, Leonard, and Weeks keep their eyes on the seminary over the river; but Fred Grover's Mary swings on the "Gates" on this side. Butler, of Windsor, Vt., has taken unto himself a wife. Josh Billings' couplet, "Life is full of care and trouble, whether you go it single or double," had no terrors for him. Silsby, at Bellows Falls, is well liked by every one, but is not quite in love with the place. He is a member of the band, and has lately become a full fledged Mason. H. N. Drury, manager at Burlington, Vt., is really an old timer, having commenced with Bain, nearly twenty years ago. He is still the same Drury, and that's enough. Davis is happy in his new place and home. G. W. Metcalf, night press man, is taking a scientific course at the Vermont University, in that city. Mrs. H. S. Upson and S. F. Magill are at the C. V. and B. and L. depots respectively. Fred L. Gregg, late of Brandon, Vt., is at his home in Shelburne, Vt., on account of ill health. George E. Marshall, at Middlebury, Vt., is our stylish man, telegraphically speaking; but Lovejoy, at Cuttingsville, is the handsome one. At Brandon, Vt., Charley Holbrook occasionally forgets himself and sends Bain. Perhaps he doesn't wish to be understood. E. W. Smith, of Ludlow, is another old timer, having been station agent and operator there for upward of twenty years. Hub Barney, of Chester, formerly "owl" at St. Albans, is as happy as a man can be alone. A certain office in this district is said to use five and one-half blanks to every message received. The manager receives a message and then looks out the name in directory to see if he has got it correctly. Woe be to the man who transgresses any executive order with which the office walls are adorned. There are lots of students there. We understand THE OPERATOR is forbidden an entrance to that sacred place. The W. U. day man is an old timer, and worthy of better company. The R. R. man is a first-class man, but is so unfortunate as to fall in the prevailing manner of the manager. The night man is a success with short words, but long ones get across his ears instead of endwise. On dit the manager was the sole means of getting the night man's salary reduced. At Keene, N. H., the same force hold forth, with the exception of night man. Darling went to Manchester last summer, and Frank Stratton, of Hinsdale, N. H., now occupies that place. At Winchendon, Mass., Johnny Gay has moved into his new office in the new depot. Dave Rind, of Fitchburg, will soon move into the new office in the Union depot. Fred Gore and O. J. Seaver are immense. Up-stairs we shall find Ed. Smith train dispatcher, V. and M. R. R., and his assistants. Miss Mary J. Bancroft, of Ayer, Mass., had the misfortune to so overwork herself that she was temporarily removed to the Insane Asylum at Worcester; but we understand she is improving slowly. She has the sympathy of the fraternity, also their good wishes. Mori on, at Concord, N. H., thinks he has the best office in the State. Cutler, at Brattleboro, Vt., is the latest working man in the district. Spencer, at Holyoke, is our millionaire, and watches stock quotations very closely. Connor, of Manchester depot, Vt., formerly night man at Rutland, has sobered down

to a steady going family man. John N. Hills, recently elected supervisor of Lake View, a suburb of Chicago, was formerly operator for American Co. at Burlington, Vt. "Honest John Hills," says the Chicago *Inter-Ocean*. H. P. Spencer, Superintendent Vermont State Prison, at Windsor, Vt., was formerly manager at Chester, Vt. All join in praising his management at prison. Frank K. Ainsworth, of Woodstock, Vt., is to graduate from Vermont Medical College, at Burlington, in June. C. B. F. Palmer, is soon to enter college at Middlebury, Vt. Frank Stevens and L. W. Weeks, old timers, are now messengers for U. S. & C. Express, with headquarters at White River Junction, Vt. H. S. Martin (Judge), formerly of New York, and at one time night manager of Boston, Mass., (W. U.) has been chosen cashier of the Citizens' National Bank of Keene, N. H. He is also an ex-Alderman of that city. Jack Bates is at Keene, with his mother's family. Fred Livingstone, late of Burlington, is now a farmer at Morrisville, Vt.

A \$1,320 Special.

The St. Paul *Pioneer Press* gives a little interesting history of the telegraph office at Bismarck, D. T., of which Mr. J. M. Carnahan, formerly of LaCrosse, is manager. It appears that there have been some big dispatches forwarded from Bismarck. O'Kelley, the N. Y. *Herald* correspondent, after a trip up the Missouri and Yellowstone, and a visit to the Custer battle field in July, 1876, sent down two books an inch in thickness each, with every sheet written upon both sides. The sheets were twelve inches long by six wide. They contain a minute description of everything O'Kelley saw. There was nothing omitted that the most elaborate reporter could think of. It was one monstrous letter of descriptive writing. There was not a word left out; every "the," "a," and "and" were in the dispatch just as it appeared in the *Herald*. It proved that the *Herald* on great occasions didn't write up its dispatches in the home office. There were scores of pages that might have been skipped as too immaterial for transmission by wire. But that was not business; the *Herald* wanted the words complete of the man who was on the ground and shared the sensations of the appalling event. Mr. Carnahan gave twelve steady hours at the key. When he finished, he checked twenty-two thousand words. The cost of transmission was one thousand three hundred and twenty dollars. We know newspapers that would grumble at a little bill like that. The sixth and seventh of July, 1876, were two memorable days in the Bismarck office. The night of the fifth the steamer *Far West* arrived with the news of the Custer massacre. The morning of the sixth Mr. Carnahan was confronted with a carpet-bag full of startling messages. He was surrounded and apparently swamped. It looked like a fruitless effort to undertake to dispatch all that business. He began, however, and with scarcely a stop, pounded his old key for twenty-one hours, going to bed on the morning of the seventh at five o'clock. At eight o'clock, with only three hours' sleep, he was up and ready for another assault. That battle was kept up for twenty successive hours, when the carpet-bag from the Custer massacre gave out. Carnahan retired, but not until 80,000 words had been sent away to every part of the country. The business of those two days was nearly \$3,000. Not bad for one operator. Carnahan is entitled to substantial recognition of his splendid service to the Northwestern Telegraph Company at that sensitive time. O'Kelley recognized it with a \$50 bill.

The Telephone Under Fire.

There is no account extant of how the telephone acts when under fire. The destruction of the Detroit *Free Press* buildings, week before last, gave the little instrument a fiery ordeal to pass through. The telephone in the editorial rooms communicates with the residence of the Managing Editor, William E. Quimby, No. 777 Jefferson Avenue, a mile and a half from the newspaper office. When the fire struck the editorial rooms, says that journal, the bell at Mr. Quimby's residence began to ring violently. As the fire increased in intensity the bell became more impetuous, pealing in gusts as the fire seemed to surge around the companion bell in the burning building. It was an embodiment of Poe's lines on "The Bells" where the rising and the quelling of the fire could be calculated by the rising and falling of the anger of the bells. At last the clamor of the telephone bell became unbearable to those in the room and the bell was muffled with cotton,

which partly stopped the alarm. But here the strangest part of the telephone's action comes in. From the speaking tube came the roar of the fire, and it would seem that the swish of the water from the engine, and the pouring of the floods from the roof could be plainly heard. The crackling of the burning timbers and at last the crash of floors and falling partitions came, and every sound of the conflagration in all its inflections faithfully reproduced, and the sudden stoppage of all sound showed that communication was broken and the voice of the wonderful instrument stilled by the scorching flames.

Telegraphers' Paralysis.

Referring to the late discussion on this subject in THE OPERATOR, the London *Telegraphic Journal* says:—This peculiar nervous affection is causing some alarm at present among operators in America, where it appears to be unusually prevalent. It is a numbness and paralysis which affects the thumb, hand, wrist, and even forearm of the operator's right or keying hand, and positive pain is felt in attempting to handle the key when afflicted by it. It is unquestionably due to overstraining of the nerves and muscles in the rapid, minute, and monotonous motions of signalling, and is generally cured by rest. Its greater frequency in America than in Europe seems to be due to the "space" letters of their alphabet, and perhaps to the longer hours that American operators remain on duty. It appears to us that the happy mixture of dots and dashes, long and short signals in the Morse code, as it is used in England and the Continent, is calculated to prevent paralysis, for every dash is a brief rest to the hand. The matter has become so serious in America that there is a talk of introducing a new code to replace the Morse, as there practiced. It would certainly be a safeguard against paralysis if every operator would learn to signal, at least moderately fast, with his left hand as well as his right. He could then occasionally rest the right, and, perhaps, more expert hand, thus giving it time to recover its full vigor before any over-stressing had taken place. This disease in question excited some discussion in England several years ago, but it appears to have died out of late, since we now hear nothing of it. We should be glad to receive any information on the subject from English operators, or others who have it to give, for it may prove useful to American telegraphers. Have the Post Office hours of duty anything to do with its apparent disappearance from among us?

Dashes Here and There.

Sound investment—buying a telephone.

The phonograph has learned to whistle, though it is scarcely out of the woods.

The *Union-Argus* office in Brooklyn has been connected with the City Hall and other public buildings by means of a telephone.

There is a telephone working between the Senate and House of Representatives and the Government printing office at Washington.

The Chinese never could use the telegraph because of their intricate alphabet, but the telephone is a god-send to them, and they already have it in use.

At the second meeting of the Electrical Society of the Ohio Valley, in Cincinnati, April 8th, the telephone was exhibited by Mr. Gilliland, assisted by W. C. Ross.

These are hard times, but there seems to be no poverty of invention. Look at the telephone, phonograph, and new name by the Executive Committee for general reduction.

The telephone has reached Persia. The Shah wouldn't believe in it until he put the tube to his ear and heard a voice calling: "Come, old fellow, square up with your creditors."

The telephone is so sensitive and perfect that you can hear a watch tick several blocks distant. It will probably reach such a state of perfection that you can distinctly hear a bed-tick.

The Western Union Telegraph Company recently applied to the Supreme Court in this city for the purpose of compelling Hugh J. Jewett, as Receiver of the Erie Railway Company, to pay \$38,250, which is claimed to be due on a lease of certain telegraph lines to the New York and Erie Railroad Company. This lease, it was contended, had been affirmed by the Erie Railway Company. Judge Donohue, April 27th, denied the application.

Permission has been granted to Gen. Shaler to place one of the instruments of the Automatic Fire Signal Company in the telegraph office at the police central office in this city.

Demoget calculates that the sound transmitted by the telephone is 15,000 times weaker than that emitted by the speaker, and he is therefore of opinion that the present apparatus is far from having reached a stage of perfection.

Helison says his phonographs will cost about one hundred dollars apiece. This will enable poor operators to keep a phonograph, although those whose salaries have been "equalized" may have to dispense with a couple of dogs.

One Texas bull can not only whip two full grown lions, but can turn around after the fight and lift an army wagon off its wheels in A 1 style," says the *Detroit Free Press*. That's nothing. We have known a bull up this way to lift a man out of a good situation.

The name of the phonograph, in German, is *unsergehaussnekeiteigenfernstehaupfteichtausgesprecher*. When you wind that up on the cylinder, and leave it till it gets cold, and then grind it out, it usually tears the machine to pieces and strikes the house with lightning.

A committee of the House of Representatives at Washington has been instructed to inquire into, and report a bill looking to the adequate compensation of the operators on the Government Departmental line, at the Senate and House. At present they are paid for the time they are employed. That is only during the session, but they will probably get an annual salary.

"LOVE WILL FIND OUT THE WAY" (Old Song).—Mistress (who does not allow "followers" in the house): "Who is that you were talking to in the kitchen, Mary? O, but I certainly did hear you talking to some one—and I thought I heard, indistinctly, I admit, a man's—" Mary (making a clean breast of it): "Well, you see, m'm, me and my young man have started a tallyphone, m'm—but he never comes nearer than round the corner of the next street, m'm."—*Punch*.

Of discoveries about the telephone there is no end. The London (Eng.) *Medical Journal* says that a physician has been enabled to hear the sounds of the chest by telephone. The time is probably not far distant when a celebrated London physician will have consulting rooms in the principal cities of England connected with his residence by telephone, and then patients a hundred miles away can be examined as accurately as at a personal visit.

On Monday last, as the result of the revelations made in the case of Hathaway, the embezzling mill treasurer, the newspaper reporters furnished, and there were transmitted by the telegraph operators of Fall River, 28,000 words, to the various newspapers in New York and New England. Of this amount, 10,478 words, or over one-third of the whole, were transmitted in the shape of special dispatches to the *Boston Herald*.—*Boston Herald*, April 26.

At the regular May meeting of the Electrical Society of the Ohio Valley, held on Tuesday evening, the 7th, suitable resolutions on the death of President Orton were adopted and highly eulogistic speeches delivered by B. H. Johnson, F. A. Armstrong and G. T. Williams. The programme for the evening consisted of a paper on induction by J. O. Shimas, and one on the galvanometer by C. E. Jones. Both were highly interesting and instructive. The meeting concluded with an exhibition of the "funnygraph," by Mr. E. C. Armstrong.

A petition to Congress was extensively signed in this city last week, earnestly commending the U. S. Signal Service to the fostering care of that body. The small amount required for its maintenance, the petitioners urge, is insignificant compared with its great importance to shipping, and is far outweighed by the value of a single first-class vessel and cargo. They therefore urgently recommend the appropriation of the full amount required to maintain the present stations and to increase their number upon the coast.

Mr. E. A. Hawkins, an operator in the Indianapolis W. U. office, recently launched a toy balloon into the air to see how far it would travel. He attached a note to it written on manifold paper, requesting the finder to return. Next day he received a letter from Lafayette, Ind., signed Harney, informing him that the balloon had been picked up there, sixty-five miles from Indianapolis. Hawkins at once communicated the details to the Indian-

apolis papers, which gave long reports of the affair. These in turn were copied by the Lafayette papers, creating quite an excitement. It turns out, however, that both Hawkins and the reporters were "sold." A fellow operator in the Indianapolis office named Lewis got hold of a duplicate of the note, and mailing it to Charley Lang of the Lafayette office, informed him of the joke. It was, therefore, the latter who wrote the letter to Hawkins, signing the fictitious name of Harney. They are not done laughing at it yet in Indianapolis and Lafayette.

PERSONALS.

Jno. Swartz is manager W. U. office, Kenton, O. "Z" makes it warm for the boys on 25.

Chief Griffin, of 197 Broadway, New York, has resigned, and accepted a position with Mr. Edison.

E. A. Cook, alias "Rush R. Sloane" presides over the A. & P. at Forest, O. "Rush" is always on hand.

Miss I. W. Mascroft has taken charge of the W. U. office at Uxbridge, Mass., in place of Miss Kate Adams, resigned.

Miss Ida E. Hammond has been promoted to the ticket agency of the E. R. R. Beverly, Mass., in connection with her telegraph duties.

J. C. Maius is agent and operator C. S. and C. R'y, Belle Centre, O. "J. C." is one of the pleasantest men on the line to work with.

F. W. Sabold, of the A. & P. in the oil country, and more recently from Western Union, Kansas City, has taken charge of A. & P. in Zanesville, Ohio.

Mr. G. B. Pennock, of Duxbury, Mass., and Mr. Bobbie Hutchinson, of 197 Broadway, New York, are to change off for three months, commencing today.

Mr. Walter M. Wilson, of Baltimore, has resigned and gone to Colorado to engage in the cattle business. Mr. H. H. Smith, formerly of the A. & P., same city, has been appointed to fill the vacancy.

Mr. John Saylor is manager, and Clarence F. Braulik assistant at the W. U. office, Easton, Pa. Messrs. Harry B. Thatcher and Richard Kane are at the L. V. depot days, and Mr. Frank Umphred, nights.

Mr. C. H. Parr, of the Western Union main office, has resigned and accepted a position in the office of the train dispatcher of a Western road. It speaks volumes for the present condition of the business when a first-class man leaves commercial telegraphy and goes to railroading.

Mr. J. F. Morrison, who for the past two years has held the position of Superintendent of the Baltimore Fire Alarm Telegraph, has been appointed night manager of the Baltimore Western Union office, vice A. H. Bauer appointed manager of Gold and Stock, vice H. H. Craig retired to engage in other business.

The operators on the Southern Division of the Long Island Railroad complain that although they are compelled to come on duty at 7 A. M. and remain until 8 P. M. to attend to W. U. business, they receive neither a salary nor commission for the service, and in sending a social message of their own are required to pay tolls on it.

Will S. Fuller, formerly operator at Jackson Junction, M. C. R. R., has been promoted to short hand clerk under Division Superintendent E. C. Brown of that road, and is now located up town. Mr. June Henderson succeeds Mr. Fuller at the Junction. The force now stands as follows: Manager, Mr. J. F. Dickey, operators, Nick, Maniates and Henderson.

OGDENSBURG, N. Y.—Telegraphic business at "Ob" is handled mostly by the Montreal Telegraph Company by the aid of eight operators. In the main office James Ingram is manager, and Al. R. Portte, formerly of Watertown, N. Y., chief operator, assisted by Messrs. Weaver and Lake. George Hall is operator at Ogdensburg dock, Ed. Webb at R. W. & O. R. R. depot, and H. E. Keeler at O. & L. C. R. R. J. B. Potrie, at the elevator of the O. & L. C. road transacts a large amount of business in the summer.

I. & G. N. R. R.—B. S. Pillow is manager and W. A. Pillow operator at Austin, Texas: John Brooks is at depot, H. Ham is at Round Rock, Homer Eads at Rockdale, L. D. Lameroux at Gause, W. Dugan and W. D. Byres at Hearne, Pete Calvert, an old timer, at Englewood, E. M. French, J. E. Watt, and Mr. Hake at Marquez, F. R. Allison at

Buffalo, Nat B. Curtiss at Oakwoods, C. W. Kouns, G. W. Crowshow, E. Leon Moore, at Palestine, and in Superintendent's office W. A. Rooke and D. J. Price; Dave Forbes is day man and Williams of N. York, night man at Houston; F. H. Marsh and Mr. Maxon are at Willis.

P. E. I. R'y ITEMS.—At Charlottetown we have James McKechnie, train dispatcher; C. McNeil, assistant, and W. Bagnall night operator; at Royal Junction H. Dyer is agent and operator; North Wiltshire, W. Scantlebury, Geo. A. Hugh is at Hunter River; at Bradalban, J. McLeod holds forth; at County Line, J. Byrne is operator; at Kensington, D. McKenzie is operator; at Summerside, A. E. Clark; at Wellington, J. E. Arsnealt; Port Hill, W. Jenkin; O'Leary, M. McKinlay; Albertson, D. Montgomery; and Lignish, Arthur Fairbairne.

Charles O. Hampton makes his debut at Drifton, Fla., succeeding Jos. B. Wood, resigned. J. Powhattan Wooten, formerly of St. Marks, succeeds Wm. T. Goodwyn, resigned, at Baldwin. It was stated through misinformation, issue before last, that Mr. Wooten had been appointed assistant agent and operator at Bainbridge, Ga. We stand corrected.

TORONTO, ONT., M. T. NOTES.—Mr. Thomas Pike, second assistant chief of this office, has been appointed agent M. T. Co., at Ingersoll, vice D. H. Flook, deceased. We wish him abundant success. Mortimer Duperow ably fills Mr. Pike's place. Mr. John Houlehan, one of our oldest veterans returned recently from Detroit with his bride. Jack has all our best wishes.

At the funeral of Supt. Williams, of the P. & W. R. R., Providence, April 29th, the floral offerings of friends were many, and exceedingly lovely. Most noticeable among them was a miniature telegraph line, designed by H. N. Williams, Jr. On a base of flowers, about three feet long, were erected four poles formed of immortelles, on which were stretched five fine silver wires, one for each member of the family. One of these wires was broken, the ends drooping. In the three spaces between the poles were the letters Mr. Williams signed, "H. N. W.," in telegraphic characters, wrought in purple violets. From the operators on the line of which Mr. Williams had charge, there was a pillow with the letters H. N. W. wrought in purple thereon. Also flowers made into shape to represent a telegraph key. There were elegant designs from Western Union and other telegraph companies. An anchor with the word "Rest" upon it; a harp with one broken string; a broken column and several wreaths and bouquets.

BIRTHS.

To Charles J. Barclay, W. U. Tel., Phil., a boy.
March 29, at Bryan, Texas, to W. W. Harris, of W. U., Houston, Texas, a daughter.
May 5, to George B. Hunt, Western Union Telegraph office, St. Louis, a boy. Ten pounder.

DEATHS.

May 11, at Mexia, Texas, of consumption, Frank Burnett, late of St. Louis W. U. office, aged twenty-two.
In this city, April 30, Mr. John C. Clowes, an old telegrapher, who has held important positions in the West; aged 36 years.

MARRIAGES.

LUCKING—FRENCH—May 2, at the residence of Mrs. Dr. Cooke, Denison, Texas, by the Rev. Mr. Dougherty, of M. E. Church, Mr. H. C. Lucking, of St. Louis, to Miss Lou French, of Lebanon, Ill.

COLLINGS—EDSON.—April 24, at the residence of the bride's parents, Cicero, Ind., by the Rev. W. H. Farrer, F. C. Collings, operator, J. P. and C. R. R., to Miss Eugenia Edson, all of Cicero, Ind.

JOHN—MOYER.—May 4, at the residence of the bride's parents, Myerstown, Pa., by the Rev. A. M. Stirk, of Lebanon, Mr. Harry John, a mine boss of Carbon Co., Pa., to Miss Laura M. Moyer, operator Western Union office, Myerstown.

ASHALD—McFARLAND.—May 6, at the residence of the bride's parents, Mount Vernon, Ohio, by Rev. L. R. Royce, Mr. Al. H. Ashald, of Salt Wells, Wyoming Territory, to Miss Kittie McFarland, of Mount Vernon.

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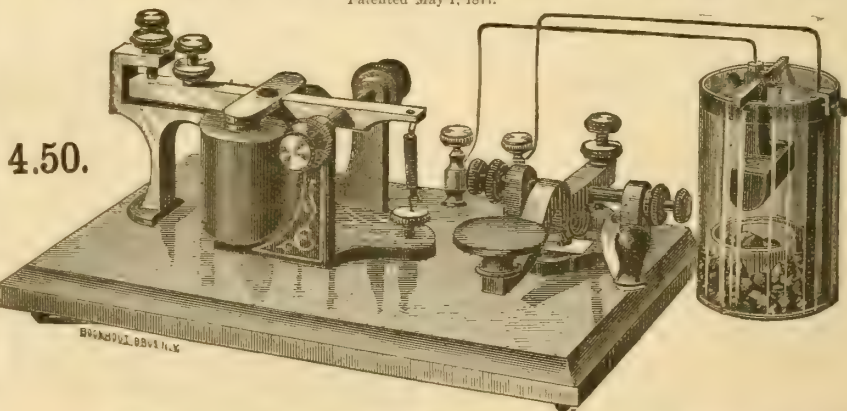
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The Old Switchman's Story.

A FAR WEST SKETCH.

"Did I know Jimmy Wild from Chicago, thet worked hyar afore you came on?
That devil-may-care little rooster, as relieved lengthy Buffalo John?
Did I know him? Should say that I did, sir. Why, Jim and I used to be chums.
An' he cottoned to me like a daisy, till I jined the big army o' bums.
Was I hyar when he died? That I was, sir. It war these hands thet closed Jimmy's eyes.
Do you see that mound up in the sagebrush?
Wal, thet's whar the poor laddie lies.
I don't mind a tellin' the story, but it makes me feel swiftish and sad,
Fur I'll tell you, pard, up and up, honest, I loved the wild, rattle-brained lad.
When Jimmy cum hyar to these mountain, he war green in the ways o' the land,
An' why he so soon tuk to sportin' is a thing that I can't understand.
But the poor devil fell in with gamblers, an' the hounds kept a tuggin' away,
Till they learned him the run o' the pasteboards, an the lad 'gin to think he could play.
Then he tooted his horn as a gambler, a thoroughbred sport, an' sometimes
When he sot in a game with a greeny, he managed to collar some dimes;
An' he went step by step to perdition, an' never once halted to think,
O' whar he'd bring up in the endin', an' at last he begun to take drink.
Then his recklessness seemed to bile over, but I'll say this fur Jimmy right hyar,
That he never neglected his bizness, nor slighted them instruments thar.
An' I don't think the Superintendent, or any one out on the line,
Suspected thet he war a drinkin', he tended to bizness so fine.
But I'll rattle right up to the climax—the night when he put out his light,
Fur I ain't foud o' lengthening the story—not by a darnation long sight.
They hed a red hot game o' poker over thar in the Humboldt saloon,
An' when Jimmy got "30" thet evenin' he' ginned up as full as a coon.
He stood lookin' on at the players till Oregon Billy got beat,
An' riz from the table, then Jimmy perceded to fill up the seat.
He called fur a stack o' the red ones, an' pardy, I'm willin to swar,
Thet thar never war sich reckless playin' as Jimmy went in on right thar.
I seed him bet two hundred dollars on deuces, an' bet it so grand,
Thet the man t'other side o' the table passed out with three queens in his hand.
But at last the turned sharps tuk a tumble, an' seed he war givin' 'em bluff.
So they laid fur the lad and his racket, an' the game thet they give him war rough.
He lost every bet that he ventured, till at last, with a crazy-like grin,
He showed up his last piece on aces, an' a "full" cross the board tuk it in.
He sot thar a thinkin' a minute, an' then he went down in his groin,
An' brought up a bag full o' twenties, the pure, yellow, genuine coin.
My har riz all up stiff as bristles, an' my heart doubled up on her beats,
Fur I seed just as sure as yer livin', he war gamblin' the office receipts.
They played a cold deck on the laddie—one t fixed fur sich 'casons as that,
But Jim war too boozy to tumble, so they had the dead wood on him, pat.
An' in less ner an hour from the sittin' he riz from the game an' went out.
Dead broke, not a scad in his pockets, an' the company's funds up the spout.
He staggered 'cross hyar to the office, an' we seed nuthin of him no more,

Till we heerd the report of a pistol, then we rallied, an' broke in the door.
We found him bent over thet table, with a six-shooter still in his grip,
His brains scattered over the relay, and him just as dead as a chip.
An' writ on a blank war this message: "I resign, get a man in my place.
I've been false to my trust, and dishonest, and I never can live in disgrace."
Up thar, on thet rough, rocky hillside, we laid the poor boy down to rest,
An' more than one rough, old frontiersman dropped a tear over Jimmy's cold breast. ARTY BRACE.

Thomas Alva Edison.

Edison started a shop in Boston, and gave all his spare time to it. His ideas here began to assume practical shape. He invented a dial instrument for private line use, and put several into practical operation. He made a chemical vote-recording apparatus, but failed to get it adopted by a Massachusetts Legislature. He commenced his experiments on vibratory telegraph apparatus, and made trial tests between Boston and Portland. He matured his first private line printer, and put eight into practical operation. From lack of means to pay for quotations, his venture was not successful, and he sold out. This patent subsequently came into possession of the Gold and Stock Telegraph Company, and was considered to have a base or foundation value upon which many subsequent improvements were built.

At one time he was invited to explain the operation of the telegraph to what he supposed was a girl's school. He forgot the appointment, and when found, was putting up a line on a house-top. He went directly from his work, and was much abashed to find himself ushered into the presence of a room full of finely dressed young ladies. He was actually timid in ladies' presence, but his subject was understood, and the occasion passed pleasantly. He was introduced to a number of the young ladies, who always recognized him on the street, much to the astonishment of his fellow-operators not in the secret. Edison is a strong believer in the Boston girl.

His idea of a duplex system constantly burned in his brain, and in 1870 he went to Rochester, N. Y., to try his apparatus between the two cities. Mr. F. L. Pope, the present patent adviser of the Western Union Telegraph Company, assisted in New York. The effort was a failure, although Edison has always claimed it ought to have succeeded. He then went to New York, arriving there dead broke and discouraged. He hung around the office of the Gold Indicator Company for several days. Their apparatus was cumbersome and imperfect, and frequently out of order. At such times the brokers would rush to the office and demand instant repairs. One day when there was an unusual excitement in the gold market, the apparatus failed. The confusion at the Indicator office was great. The Superintendent was out. Edison happened in and stood watching the confusion. He volunteered to fix the machinery. The President looked upon him with amazement, but, being in the mood to catch at straws, gave him permission to try. He speedily found the defect, and the next day was engaged to fill a responsible position with the Company. He immediately began to improve the apparatus, and soon invented a gold printer. The Company was purchased by the Gold and Stock Company, and Edison was thrown out. He then went into company with Pope and Ashley. The Pope and Edison printer was brought out, and a private line system was put in active operation. This was soon sold to the Gold and Stock Company, and Edison has for many years been retained in the service of that Company and the Western Union Telegraph Company at a large salary, they having the first option to purchase his inventions pertaining to telegraphy at prices agreed upon in each case. Edison's inventions pertaining to the gold and stock telegraphy soon replaced the old apparatus, and that system is interwoven with his inventions and improvements. At the formation of his intimate connection with the Gold and Stock Company, he established an immense electrical manufacturing establishment at Newark, which was divided into three large shops and two laboratories for experiment. He employed upwards of 800 men, and was himself the busiest man in America. He gave himself scarcely any time for sleep. An idea of his determination and persistence can be gained from the following incident: He had been given an order for \$30,000 worth of improved printers. The sample instrument had worked an experimental circuit, but the first instruments for practical use proved a failure. In vain he sought to remedy the defect,

till, finally, taking four or five of his best men, he went to the top floor of his factory, remarking that they would never come down till the printer worked. They labored continuously for sixty hours, and he was so fortunate as to discover the fault, and made the printers operate perfectly at an expense of \$5,000. Such severe and protracted labors are common with him. He says after going without sleep more than the ordinary hours he becomes nervous, and the ideas flow in upon him with great rapidity. His sleep after these efforts is correspondingly long, sometimes lasting thirty to thirty-six hours. He knows no such division as day and night in his labors, and, when the inspiration is upon him, pursues the investigation and experiment to the end. As a manufacturer he did not prove a success. The more resources at command, the greater his efforts at invention. At one time he had forty-five distinct inventions and improvements under way. All the large sums received for his patents, and the profits arising from manufacturing to the amount of nearly \$400,000, have been expended in inventive efforts. He finally became excessively annoyed at the tax upon his powers arising from regular business, and concluded to remove to some small place inconvenient to reach, where he would be free from curiosity-seekers, and have opportunity to put into practical shape his conceptions. In 1876 he sold his machinery, and moved his family to Menlo Park, N. J., on the Pennsylvania Railroad, twenty-four miles from New York. Here, on the crest of a hill, remote from other buildings, he built a laboratory 28x100 feet, two stories in height. In one room on the ground floor he has a machinery apartment, in which is located a ten-horse-power engine, and a collection of expensive tools, so that any appliance, however intricate, can be made under his own inspection. In another room are ranged on shelves and in cases the models of a large number of his experiments and inventions. Here are also to be found many instruments of precision, which he has purchased at great cost, to assist in his investigations. His library is entirely scientific, and costly, but not large. On his upper floor he has ranged upon shelves thousands of bottles of chemicals, and he makes it a rule to purchase some of every known chemical or mineral, to have at hand in case of need. Here he conducts his experiments under his personal supervision. He has always with him three or four assistants, whom he has selected on account of their skill as draughtsmen or workmen, willingness to comply with his wishes, and their physical endurance, which, with him, is an important consideration. Messrs. Charles Batchelor, Scotch, and James Adams, Irish, and Mr. Kusel, of German descent, are the principal assistants. Sometimes he has fifteen men employed exclusively in developing his inventions, if of importance and near completion. Edison was described by the United States Patent Commissioner as the young man who has kept the path to the Patent Office hot with his footsteps. He has been granted 112 patents in this country, and has some twenty applications pending in the office. His most valuable inventions have been patented in many foreign countries. Of his American patents, thirty-five pertain to automatic and chemical telegraphs, eight to duplex and quadruplex telegraphy, thirty-eight to printing telegraph instruments, fourteen to Morse telegraph apparatus proper, and the remainder relate to fire-alarms, district and domestic telegraphy, electric signals, the electric pen, the speaking phonograph, and a variety of electrical and non-electric apparatus.

The printing telegraph instruments, the automatic or chemical system, by which 1,000 words a minute can be transmitted on a single wire for medium distances; the quadruplex system, by which four messages at a time are sent on the same wire by the Morse method; the electric pen; the carbon telephone, which exceeds all others for its loudness and distinctness; the speaking phonograph, and the aeroplane are among his most valuable productions.

He has made many extremely interesting and minor discoveries, such as the lubricating property of electricity, upon which the electro-motograph is based, and upon which could be built an entirely new system of telegraphy. His mind is so prolific that he can always afford to accept reasonable compensation for his inventions.

He is sharp at a bargain, and has been styled a Tallyrand in negotiating for the disposition of his inventions. His peculiarities and the great value of his inventions have led to severe struggles for the possession of some of them. His great anxiety seems to be to give an equivalent invention for the price asked, but he professes to be utterly without conscience in case of any attempt to overreach him. In person he is five feet nine and one-half inches

tall; he wears a seven and seven eighths inch tall hat; his hair is black and worn short, and is slightly gray. His complexion is pale and fair; his eyes are gray and piercing; he has a sharp nose and countenance. When in application his look is most intense, although there is often a merry twinkle in his eye. His chest expansion is five inches. His powers of application, patience, and endurance are something wonderful. He begins where most people leave off, and, like a Morphy at chess, carries on five or six lines of experiment in totally different divisions, never ceasing any of them till a result is reached or an impossibility proved. He keeps a careful record of each day's experiments, properly witnessed, and has numerous volumes of such statistics. He is quite hard of hearing, and his accomplishments with the telephone are most remarkable on account of this defect. For a long time he was unable to distinguish the sound produced, and depended on his assistants. He many times despaired of a result. At last he got his carbon telephone sufficiently loud so that he could hear it over long distances without difficulty, and was satisfied. That such a man should go on and eliminate the speaking phonograph is surprising; and, in view of his defect, he may almost be forgiven the production of the aeroplane, intended to talk from three to ten miles. He was married to Miss Mary Stillwell, of Newark, in 1873. The medallion on the new silver dollar is an excellent profile likeness of her. Their honeymoon was eccentric, as Edison, although in the same city, could not leave his work for more than a few hours two or three times a week, the remainder of his time being used at his factory. The influence of his wife has greatly improved his habits and appearance of recent years. They have two children—a little girl five years and a boy two years old—who are nick-named "Dot" and "Dash," after the characters in the Morse alphabet. He is affectionate and generous in his family, but rides rough shod over the ordinary mannerisms of life, and gets down to what he calls solid business. He has a large and comfortable residence near his laboratory. He says the existence of a God can be demonstrated in a thousand ways to an absolute certainty, but he has no religious convictions in the ordinary sense. His attention has heretofore been largely turned to electricity, but his knowledge extends over a wide field. He feels confident of being able to produce one or two things equally good as the quadruplex, telephone, electric pen, or phonograph, in a year. He fully expects to live to the age of the oldest member of his family, in which case, if the public desire a relief from his inventions, the only way will be to hang him, as the *New York Times* suggests, for prevention. His income from his inventions the present year will probably reach \$50,000, all of which will undoubtedly be spent in pushing his inventions to completion. His personal tastes are very simple. When invited to dine recently at Delmonico's, he satisfied himself with a piece of pie and cup of tea, greatly to the astonishment of his host, who wanted to do the handsome thing. When tendered a public dinner, he declined, stating that \$100,000 would not induce him to sit through two hours of personal glorification. He dislikes personal notoriety, and says a man is to be measured by what he does, and not by what is said of him.

When a success is reached, it rapidly loses interest for him, and he must find some fresh impossibility upon which to expend the fuel of his genius, and burn out his life.

Where can an example be found who has done more in his own sphere than Thomas A. Edison to promote knowledge and bring the secrets of Nature under the useful control of his fellow-men?

Brian Born's Hard Luck.

Any operator who has traveled by the Midland or Nipissing railways, will no doubt recollect Woodville Junction where those two roads cross, and where, in all probability, he had to wait a couple of hours, no matter in which direction he was traveling. In accordance with some mysterious rule strictly adhered to by all railways in forming a junction, it is about the loneliest station on either road. The village, if such it can be called, consists of two hotels, a blacksmith's shop, one or two storehouses, a pile of wood, and a flag pole, the latter, no doubt, erected by some disgusted pioneer with a lively sense of the ludicrous.

It was toward the close of a dreary afternoon in October, that the local express of the Nipissing railway, on which I was a passenger, was drawing out of this station on her way to Toronto. Having fixed myself in a comfortable position near the stove, I was congratulating myself on getting away

for once without laying over, when the car gave a sudden lurch, and stopped so violently that the stove and I started simultaneously for the other end of the coach, where we arrived in due time, the stove considerably demoralized, but I in good shape, the difference being doubtless owing to the fact that the stove brought up against the end of the unyielding car, while I landed on the stomach of a corpulent old gentleman, who had previously arrived. Going out to see what was wrong, we found it was caused by a broken axle, and that two cars had been thrown off the track just where the two roads cross, effectually blocking both roads for some time to come. No one was seriously injured, however, and after satisfying myself that further progress was impossible unless I chose to walk, a mode of locomotion I didn't greatly admire just then, I started back for the junction, contemplating a wait of several hours with feelings of anything but pure delight. Presently the midland train arrived from the north, and I could hardly believe my eyes when I saw Cam Benson step off the train and survey the obstruction with every appearance of disgust. I was overjoyed at the prospect of such company, and we were soon comfortably seated in the parlor of McCarthy's hotel, exchanging our experiences on life's stormy circuit since we had last seen each other, nearly two years before. He was just returning from Muskoka, where he had been opening offices for the last six months. Hearing the Midland train from the south approaching, we went over to the station, and while watching with secret satisfaction the ill-concealed disgust of the passengers at the interruption of their journey, and listening to some pointed and sarcastic remarks on the occasion, I was startled by the ejaculation of Cam: "Well, by the great ground wire! there is Billy McNaughton and Aleck McKenzie!" They were on their way to Muskoka for a few weeks' hunting and fishing. The Nipissing train from Toronto, arriving at the same time, re-inforced our party with Wasburton, who was on his way to Orillia, and whose jovial countenance lighted up on beholding our party, two of whom, McNaughton and I, he knew.

After replenishing the inner operator we adjourned to the sitting room, which was unoccupied except by something in the shape of a man who was stretched out on the sofa, with a carpet bag under his head, and his feet encased in a dissipated pair of No. 12's, which appeared to have lost all self-respect, as they stood out in prominent view over the end of the sofa, and seemed to glory in their wretchedness. The remainder of the individual was concealed from view behind dense clouds of smoke, issuing from a pipe which had seen better days, being a meerschauum bowl ingeniously grafted on a wooden stem by means of an old cartridge. Concluding that he was some poverty stricken tramp turned in for a rest, we took no further notice of him, and chatted away as operators will talk.

Cam Benson recounted some laughable experiences among the unsophisticated pioneers of Muskoka. McNaughton and McKenzie told of times that try men's souls, and living deaths with western plugs. Warburton conversed on railroading, and told in his inimitable style of lively times on the Grand Trunk. Old timers long dead to the telegraphic world were resurrected, and their deeds recounted with fluency and animation, till we all bemoaned our hard luck in having to live in these degenerate days of hard work and poor pay, while those festive old timers had scarcely anything to do but draw big salaries, and have a good time generally. Each of us endeavored to make his case out worse than the other, and some particularly doleful tales went round, and might have been followed by worse still, but just then the individual on the sofa lazily raised himself to a sitting position, giving us a chance to see his whole form, which fully confirmed our idea that he was a tramp, and after knocking the ashes out of his pipe he surveyed us critically for a moment, then looking intently at the opposite wall, said, reflectively, as if speaking to himself:

"Well, boys, you have probably seen some hard times, and have had some pretty hard luck, I suppose, but when you come down to the fine thing, you don't know what bad luck is. Just pay attention, and I'll unfold a tale of hard times and bad luck that will cause the tears to trickle down your cheeks. I needn't ask if you have heard of Pat O'Shay, better known, as paragraphs say, as Brian Boru? Oh! you haven't, eh?" he went on, with a tinge of sarcasm in his voice, as we solemnly shook our heads, and looked inquiringly at each other. "Well, that's me, boys, and I'm an operator."

"Yes, sir," he added, emphatically, noticing the open-mouthed astonishment that greeted this statement, "and, second to none in this country, you can go your little pile on that. Talk about hard times! I and bad luck seem to be warm friends. We've chummed together for fourteen years." Here he intimated a desire for a chew of tobacco, and a plug being promptly forwarded, he bit off a piece of appalling dimensions, and abstractedly dropping the remainder in his pocket, threw himself back in a comfortable position, and resumed in a low, drumming, monotonous tone:

"I learnt telegraphing in Montreal fifteen years ago, working my way up from messenger to operator till I had a situation worth eighty dollars a month. I might have been there yet only that I had a row with the chief about a mislaid message. It wasn't my fault, but it was my luck to get blamed. So I told the chief my opinion of him, resigned, and went to Halifax, Nova Scotia. There I got a job with the W. U., and held it down for six months, but one day it was discovered that some operator was giving information privately received through the office. Of course, suspicion fell on me, and I was discharged. Coming east to Kingston, I went to work on the Montreal, at seventy-five dollars a month, but just as I got nicely settled I sent out a message with ten thousand where one thousand was written in the original copy. I could take my dying oath that it was the sender's fault, but circumstances and my luck were dead against me, and I had to take a walk. Then I worked in Toronto, Hamilton, and London for short periods, getting into trouble in each place, and finally leaving in disgrace every time. Crossing over to the States I struck oil in a small town in Michigan. I had a regular prize package. The office panned out sixty dollars in gold; there was very little work to do. I stood high in the affections of a widow worth \$10,000, and had established my character so well that I could get my clothes on credit; but just as fortune appeared to be smiling on me again, down comes my house. One day there was a mysterious deficit in the cash, so of course I got the blame and my walking papers together, and had to strike out for pastures new. Times were good in those days, and a fellow who wasn't too particular could get lots of work. So I started on a grand tour through the States, working here and there and all over, at anything that came handy. Sometimes I was telegraphing, and more times I was drawing a canal boat. One season I was clerking on a steamboat, and the following winter I tended bar in Detroit. The next summer found me a bookkeeper on a Mississippi raft, and that winter I was advance agent for a minstrel troupe. One year I was herding sheep in Nebraska, and the next I was in jail in St. Louis. But wherever I went my internal luck tagged right along after me, and kept me in perpetual trouble. At last I returned to Canada, and secured an appointment as night operator on the Grand Trunk, but just as I was beginning to think that my luck had changed, I let a train go that I had orders to hold for another to cross. The trains met, but saw each other in time to stop, but I was arrested just the same, and run in for sixty days. I came out disheartened and weary of life, but resolved to brace up and try again. Times were very dull then, and situations scarce. I had no influential friends to help me along, not even a recommendation, and I traveled through nearly all Canada that summer on foot except when I got a chance to beat my way on a freight train. Just as I was giving up in despair, and debating whether to drown myself or cut my throat, I got a situation as night operator at a small station on the Canada Southern. It was a miserable, lonesome place, no village within five miles, and the nearest house a mile away. To make it more interesting I fixed myself up as a ghost, and stood on the track in front of a train. As soon as the driver saw me, he reversed his engine, and made her climb back to the next station as fast as the wheels could turn, right in the face of another train, and on time of the Atlantic Express due to leave. Of course I was found out, reported, and honorably acquitted from the company's service."

Here McNaughton groaned as his head fell over the back of his chair, and his eyes closed in slumber, and as McNaughton rolled over on the table, he remarked: "Well, I'll be blowed!" These, however, Brian didn't appear to hear; at all events, he continued his mournful tale without interruption, but sleep overpowering me I heard no more till the welcome shout of all aboard greeted my delighted ear.

It was long after midnight, the lamp had burned out, but a chandelier in the hall threw a ghastly

light into the room. In the bustle that ensued getting valises, overcoats and umbrellas, Brian Boru was forgotten, but when quiet was restored, it was with a strange feeling of superstitious awe that we heard him continuing his doleful reminiscences in the same monotonous, drumming voice. With one accord we turned and looked at him with a nameless terror creeping over us. Warburton's suggestion that it was a talking machine worked by some internal or infernal machinery, was received with some credit, as a certain inanimate appearance gave weight to the assertion, but we were on the point of leaving without definitely settling the matter, when Cam Benson, who had been attentively examining the subject, suddenly broke into a joyful laugh, and announced his discovery that the man was asleep. So it proved that he was talking in his sleep, and had been for several hours.

Silent and thoughtful we sought our respective trains, and soon the miles rolled up between us and Brian Boru.

Q. CUMBERS.

The Proposed Telegraphers' Protective Association.

I am glad to see the telegraphers coming to the front for the purpose of organizing a protective union. Should they, however, form an organization, I hope they will not term it a union, as all railroads and other corporations are determined to break up all societies composed of the working classes termed unions, and what corporation could do it better than the Western Union Company. However, we can organize under any other name, and pass unmolested.

I have watched with great interest all articles in THE OPERATOR touching upon bettering our condition, and while many touch upon the subject, none suggest a remedy. They all seem to satisfy themselves by venting their spleen upon the Vanderbilt ring, and then let the matter rest. Now I cannot see what good this raving does. Vanderbilt and undertrappers pay no more attention to this weeping and wailing from telegraphers than they do to the miserable discords of a street hand organ, deeming the operators of little consequence at best, and their wailings as the whines of a punished cur. They cannot believe, or pretend they cannot be made believe, that the employes of the Western Union Company have any rights that they as the masters are bound to respect, excepting those rights given every citizen by the Constitution, nor will they ever accord us any rights whatever until they are compelled to by a protective organization. Before we organize, however, let every operator repeat the watchword, no strike. No organization was ever benefited by a strike. Why not come down to first principles, and find the prime cause of our present deplorable condition. We cry telegraph college, but that is not it; we are ruining ourselves every day by having "our boy" with us to clean battery, and run little errands for us, to watch the calls which we learn him as soon as we can possibly pound it into him, so that he can say in answer to a call; "operator busy on our wire," while in fact we are out with a friend. The boy soon learns to send a little, then take a little, and before we are aware of it he can run the office, and writes to the superintendent that he has done most of the work in "Xy" office for the past three months, and is willing to run an office for thirty-five dollars a month. A few days, and off goes our head, and "our boy" has the position. This is the way with more than one-half of the students. Then we blame the telegraph college for overstocking the market with plugs, when in fact we all have our own little "plug factories," at least seven out of ten of the railroad offices have. I am a railroad plug, and speak from experience. Our day dispatcher is an operator of seven years' standing, and has been dispatching four years. He works twelve hours a day for forty dollars a month; his copyist works thirteen hours a day, and receives thirty-five dollars a month. Does not this speak volumes?

I fear, however, that we can never organize so as to make the society a success. I had a long talk with our division superintendent a few days ago. He is a telegrapher of twenty-five years' experience, and tells me that in all his railroad experience he finds less stability among operators than among all other men on the road combined. Does this not look blue for an organization? Yet in the face of this we must make some kind of an effort to help ourselves, and the sooner we decide upon some plan the better. I cannot see any way out of this mire than to organize to stop this plug learning. The

colleges on a large scale do not amount to anything compared to our little plug factories. Now, can we in any way prevail upon our superintendents of telegraph, commercial and railroad, to dismiss all learners, and positively prohibit students? I fear not, as the more students apply the cheaper they will work. Then it rests with the operators to keep "our boy" away from the key, and to do without him altogether. Because a superintendent may send us a student we are not compelled to teach him, and as soon as we cease giving him instructions he will turn his face toward something else, and that would be one more less in each case. Since I have been telegraphing I have succeeded in breaking up one college on a wholesale, and several little home plug factories by having the "teachers" discharged. I may have made a few enemies by the action, but I am willing to make half a dozen enemies, such as they are, any day to "burst a factory." I sincerely hope that other operators will begin the same kind of a war, and keep it up until every student, and every one of "our boys" are driven out.

DOWN EAST, May 18th.

It will only be possible, within the limits allowed me in your columns, to outline very briefly a general plan for a Telegraphers' Protective Association. In the preamble to the Constitution, the following purposes and objects should be engrafted:

To establish and maintain the heretofore unrecognized right of telegraph employes to combine for the purpose of protecting their interests. To promote good and fair understanding of the rights and claims of both employers and employes. To protect members against unreasonable reduction of wages, and to afford a ready means, by arbitration, for the settlement of all disputes. To endeavor to maintain a position of industrial independence by regulating the admission of learners into the business. To establish local reserve funds, thus encouraging habits of prudence and economy among improvident members, by the example of others associated with them.

I have here indicated some of the principal purposes and objects that should be carefully borne in mind by every man who assists in this movement. It need not be expected that we can make any progress at the start toward the attainment of these objects, except in the direction of the one first mentioned—that of establishing the right to combine to protect our interests. Success in this direction will be of vital importance, as the possibility of conferring future benefits upon members hinges entirely upon it; and, therefore, at the start, the energy of every member should be exerted solely in securing this object. To accomplish this they should expect to work patiently, making a continual sacrifice of time and attention to push forward the work, until the association is planted in all the principal telegraphic centers throughout the country; and no member should expect to derive any benefits whatever until this point is conceded and established beyond a doubt. When this is accomplished, and the Association becomes a publicly recognized fact, then, and not till then, will it be possible to work up, step by step, to a more perfect organization.

The organization should consist of separate branches or divisions similar to the old League Association. The general government of the Association should be conducted by an executive committee of seven or nine members, composed of four general officers and three or five other members, all of whom should be members of some branch, which should be selected as the headquarters of the Association. The executive committee should exercise general supervision over the affairs of the Association. They should be empowered to conduct negotiations looking to the arbitration of disputes, and all questions of grievance or disputes between employers and members should be referred to them for consideration; they to recommend to the Association such action as might be deemed wise. At least a two-thirds popular vote of the entire organization should be required to bind the members to support a strike, or any other important movement. At least a majority vote of all the members of a division, or branch, should be required to order the reference of any grievance or dispute to the executive committee. Oaths should be ignored as relics of ignorance and brutality, as evidenced in the early history of trades unions. The conditions of membership should require each member to subscribe to a pledge promising to obey the constitutional rules, and to aid in the protection of members. Operators only should be eligible to membership. To facilitate the growth and extension of the Association, the properly identified signatures

of the persons required to start a branch or district should be accepted as evidence of its organization.

I have here briefly outlined a definite plan of an organization that, if adopted and sustained by the men employed as operators in this business, will be big with possibilities for future usefulness and benefit to the fraternity. I should be pleased, however, to hear through the columns of THE OPERATOR from others, who think they can point out defects in this plan, or suggest a better one.

SENTINEL.

I for one say let us have the "Protective Union" based upon some such system as "Sentinel" proposes; but don't leave out the railroaders. If we succeed in organizing such a Union, would it not be a good idea to take in the pipe line boys? Here in the Penn. oil regions there are a good many of them, and they do a good deal of commercial business over their wires. They, too, are to suffer a "sliding scale," to take effect June 1st, which brings them down to hard pan. As "Boone" says, we will have to do something, or else quit and go to turning brakes to secure a living. If operators would stop taking students, say for two or three years, would it not be a benefit to us all in a long run? Let's have this in one clause of the "Protective Union." I know of two cases on a road, not far from here, where the salary of the offices were cut down so low (\$45) that two good operators had to leave and go into other business. These two offices were filled by students at \$36 and \$37 respectively.

PRP.

OIL REGIONS, May 17, 1878.

The New York Wire Club.

Sweetest of all childlike dreams,
In the simple Indian lore,
Still to me the legend seems
Of the shapes who flit before.

Flitting, passing, seen and gone,
Never reached, nor found at rest,
Baffling search, but beckoning on
To the sunset of the blest.

Jerry Borst opened the proceedings with a fine rendition of the breezy and catching melody of "Nancy Lee." At 8.10 P.M. the clatter of horses' hoofs were heard, and in a moment more Supt. Weller drew rein and dismounted. He announced that his ride from Gowanau had been performed in a little less time than that of Peralto for the same distance at the Riverside Park. He added that he had been received with great enthusiasm along the route. Morris Brick remarked that it was another case of mistaken identity. Undoubtedly the simple rustics believed they had seen in the form of Mr. Weller the personal presence of Chaplain Beecher. (Applause.) The reporter of THE OPERATOR arose to a personal explanation, dissatisfaction having been expressed at the meagre report of the last athletic meeting of the club. He said that a fuller report had been unavoidably crowded out, and reminded the members that "Discontent is a vital element of civilization; without it there would be no progress." (Laughter and applause.) Jules Guthridge stated that he intended to exhibit the phonograph in Kentucky. The motto of that grand old commonwealth is "United we stand, divided we fall." (Loud cheers.) In bidding the members good-bye, he wished them individually and collectively all manner of success. (Applause.) The chairman, Denny Harmon, announced that since our last meeting one of our members, Roscoe Sprague, had crossed over "the river of death," to rest under the shade of the trees. He trusted that "Sprague's" grave was "the inn of a traveler on his way to the New Jerusalem." (Applause.) The meeting then adjourned.

Complaining of the unsightly telegraph poles in this city, a writer in the Herald says: "Cannot something be done toward the removal of the horrible telegraph poles which disfigure our entire city? Have telegraph companies the legal power to place their ugly poles wherever they please? Has not a citizen as much right to remove a pole from in front of his house or store as he has to remove any other nuisance? If these 'crooked and ugly eyesores' are placed everywhere on our finest thoroughfares and around our public parks illegally, why do not the gentlemen who take a pride in the beauty of our city look into the matter? How is it that in every second-rate city in Europe wires are placed under ground? If the Western Union is afraid of the expense let it declare smaller dividends."

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

June 1st, 1878.

BESIDES those published, we have received a very large number of communications on the subject of the proposed protective association, which we are unable to find room for in this issue. Several other articles, including one from Yosef, are also held over for the same reason.

AN article on the death of Professor Henry, and his connection with electrical matters, will be found in another part of this issue. The professor was the first to prove, by actual experiment, that in order to develop magnetic power at a distance an intensity battery and a magnet, surrounded by many turns of one long wire, must be employed.

WILLIAM ORTON, JR., and Ex-Judge Oliver H. Palmer, have filed a petition for the granting by the Surrogate of letters of administration on the estate of the late President Orton, there being no will discovered among the papers or effects of the deceased. The personality of the deceased upon which administration is sought consists of furniture, carriages, horses, jewelry, ornaments, etc., and is estimated at \$50,000.

WE regret to learn that on account of ill-health Mr. W. A. Austin, "XYZ," of Albany, has been compelled to take a leave of absence for four months from June 1st. He will spend the summer at Lake George, and, we hope, return to Albany in the fall thoroughly re-invigorated in health. Mr. Austin has always been a warm friend of THE OPERATOR, and for him, and all the operators in that city, there shall ever be a warm spot in our heart.

THE use of the telephone for public communication has been inaugurated in the west. In due time it will be introduced in a similar manner in the east, and will no doubt ultimately spread all over the world. Telephonic connection is already established in Illinois, between the cities of Urbana and Champaign, Bloomington and Normal, and projected between Rock Island and Moline. The charge for sending a message from one station to another is said to be only five cents, with an extra charge of five cents for delivering it outside the office.

WE have received the initial number of the *Railroad Enterprise*, published by Mr. Day K. Smith, Exchange Building, Chicago. The paper contains sixteen pages, in size a little smaller than those of THE OPERATOR, is handsomely printed on tinted paper, and, while there is but little strictly telegraphic matter in it, is well filled with railroad articles and other items which will render its monthly visits welcome to telegraphers. The first number of the *Southern Operator*, an eight page monthly published at Bolivar, Tenn., is also before us.

The Proposed Protective Organization.

In response to the invitation extended in last issue, we have received a large number of votes in regard to the proposed protective association, suggested in THE OPERATOR of April 15th. Strangely enough, every vote so far received, is in favor of such an organization. Not one single person has yet come forward to oppose it. This certainly demonstrates that a movement of the kind would find general favor with telegraphers.

In forwarding his vote, one operator says: "I would join such an organization to-day with heart and soul were one organized." Another says: "My voice is emphatically for organization, protective at all times, and aggressive, if necessary to maintain our rights." A third says: "There are nine in this place who will stand to the rack," and a fourth says: "I most heartily indorse the proposed protective association, and if I can be of any assistance in the oil region, you are at liberty to call on me." This will show the feeling of the fraternity in the matter.

We give in another part of this paper the opinions of several correspondents on the subject, which will well repay perusal, particularly those of Sentinel and Key. The latter makes an able appeal against the habit, now as common as it is pernicious to the interests of the fraternity, of tolerating students in offices. Because an operator wants some one to black his boots, clean the batteries, and run on errands; or, because he thinks he can thereby add a few dollars to his salary, a boy is taken in, learned the business, and in a short time assumes charge of the office at a smaller salary than was paid his tutor, who is thus thrown out of a situation only to again obtain a position, if at all, at reduced compensation.

But, unfortunately, it is not only the men who learn them that these students oust out of their positions. They oftentimes succeed good men who are above teaching students—superintendents in these degenerate days of sliding scales and gradings, thinking it economy to employ them because they will work for almost nothing.

The same correspondent finds fault with operators for not "pulling together" better than they do. We wish we could say that the superintendent he quotes is mistaken; but the fact is too apparent to be contradicted. When we look at men in other walks of life who are ready to do so much for their companions, and remember how generous, warm-hearted, and fraternal operators are, we are at a loss to understand why they are not each more willing to sacrifice something for the general good of the craft.

What pleasure has a man in this world whose highest aim is to "look out for number one"—whose only thought is how he himself is to secure a large share of the good things of life, irrespective of how many others suffer? None at all. The only real happiness in this world, as anybody will tell you who knows, is found in trying to render others happy. One plank of the proposed organization should be that members would pledge themselves to do something and sacrifice something for the good of the fraternity; and an effort should be made to dispel the feeling of jealousy too often existing among telegraphers, particularly between railroad and commercial operators, and first-class men and what are called plugs. Like masons, we should all meet on the level, and, if possible, act upon the square in the matter of doing unto others as we would be done by.

Another plank should be that, in view of the unquestionable over-supply of telegraphic labor at present in the market, every member would pledge himself not only not to teach students himself, but to discountenance their learning elsewhere by all proper means in his power. Many colleges and such places might be broken up if telegraphers would only persistently set their face against them. If they did, they would soon see what a difference it would make in the matter of salaries. Superintendents will tell you that they can get first-class men to work for fifty dollars a month, and you are glad to accept a position at a smaller sum. The fact of the matter is, that there are no first-class men out of employment who desire to work, and probably never will be. It is these boys who cannot take a position, and couldn't hold one if they had it, who are ruining the business, and dragging down salaries. Let's put our foot right down on the further manufacture of these embryo telegraphers for the present, and a very short time will suffice to show the wisdom of such a step.

The organization should also endeavor to effect a proper classification of operators. The late so-called grading was only a farce. Suitable classes or grades should be established whereby an operator shall have a reasonable chance of obtaining the salary and occasional increase to which his merits may entitle him. And, certainly, the weekly or semi-monthly meetings might be made both interesting and instructive to those who attend, and conducive in a marked degree to a better understanding of each other, and a more friendly, fraternal, brotherly feeling among all classes of telegraphers. There are a thousand and one ways in which a protective organization of this kind might be a rich boon to the fraternity, without at the same time coming into collision with the interests of the company.

The Western Union, however, will probably look with disfavor on such an association, fearing that it may lead to a strike. But there is no reason why it should, or why the organization should be inimical to the interests of the company. It should merely be a combination for mutual protection, and not of an aggressive nature. Operators do not want a strike. All they want is justice at the hands of their employers—a fair equivalent for their labor, proper treatment by their superior officers, and that their salaries shall not receive quite so much sliding scale and gradation attention at the hands of the Executive Committee. If the company opposes such an organization, it has itself to blame for its existence. Did it treat its employes justly, there would be no occasion for one, at least not as a protective measure. But it has oppressed them so long and so relentlessly that it is about time that they thought of taking some action in their own behalf. "A worm," we are told, "will turn, being trodden on," and why should not telegraphers make an effort to stand up for their rights?

Of course, the organization should be so strong as to be able to strike, if such a course became necessary, and not only to strike, but to hold out until it gained its point. And, if it were, we do not think that it would ever find it necessary to resort to extreme measures. The company had quite enough of the strike last time—probably more than it bargained for. It cost it no very inconsiderable amount, either. The gross receipts for January, 1870, the month of the strike, were only \$543,938.69, against \$606,051.90, in the

same month of 1869, while the expenses were \$408,031.08, against \$349,578.70 in January, 1869. Compared with the corresponding month of the preceding year, this shows a reduction of \$62,000 in the receipts, and increase of \$67,000 in the expenses, and a decrease in the net profits of over \$120,000 for the month, which does not by many thousands of dollars represent the actual damage to the company from the strike.

The managers of the company very well know, moreover; that the fact of the first strike not being a success is no reason why a second one might not be. The League was surprised at its most distant outpost, but the lessons learned then and subsequently would probably be found very useful should another strike be precipitated by the company as it was before, for the purpose of destroying the association. We don't think that any other course is likely to lead to a strike, for if the organization were strong enough, the company would not be very likely to give its members any cause for a strike. It is fully aware that in such an event the operators have everything to gain, and nothing to lose, while with the company it is the very reverse. After the last strike many of the best operators in the country left the business, and the company discharged others on account of their participation in the trouble, but in a very short time it was glad to take the latter back at good salaries, and to offer tempting inducements to those who had left the business in hope of bringing them back.

For these reasons we do not think that a strike is at all probable. Certainly, the operators don't want to strike, and we have shown that it is not to the company's interest to have a strike. A protective organization, however, seems to be needed. The question is, shall one be inaugurated, and who will make a move in that direction? Those who have not yet voted as to whether they are in favor of or opposed to such an organization, will oblige by sending us their votes at once.

A MEETING was held in the Manager's Room of the Produce Exchange in this city last week, to consider the subject of telegraphy, with a view to securing financial support for a project to construct a separate line to the West for the convenience of merchants. Mr. W. A. Cole, President of the Exchange, acted as Chairman, and a committee, consisting of Messrs. Cole, Livermore, and Dalley, reported that they had consulted the officers of the Western Union Telegraph Company, and had found that the best thing to be done to carry out their plan was to consider the cost of building a private line. It was stated by Mr. Dorphy that a private line could be built for \$500,000, and that a line built at that cost would yield a profit. Members of the Exchange are now paying on messages to Chicago and intermediate points an average of fifty cents per message, and it was safe to estimate that a reduction could be made of twenty-five per cent, and 1,200 to 1,500 messages are sent each day from the Exchange. On motion it was decided to appoint a committee to take into consideration the cost of a line, and to ascertain the disposition of members. Mr. Cole will appoint this committee, but he says that the construction of the line is to be an individual enterprise, and not an undertaking by the Produce Exchange.

AGAIN there comes complaint in regard to the Chicago office. This time very grave charges of systematic swindling are preferred against the management, which, if untrue, they cannot afford to treat with contempt. If true—and we might say that we have it on undoubted authority—the Executive Committee of the Western Union should at once institute a searching investigation, not only into that matter, but into the entire management of the office. Continually are we in receipt of complaints against the Chicago management, and unless we and all the best informed men in the office are much mistaken, a thorough investigation from headquarters, or by General Stager, will develop a state of affairs that will astonish those who implicitly believe in the integrity and pureness of purpose of the management of that alleged model office. No man who has once worked in Chicago ever desires to return there again, and those employees who are there seem disposed to leave it just as rapidly as they can get away, which speaks volumes for the treatment they receive. We shall be glad to hear of an investigation, and such changes as shall put an end to these annoying complaints. The management may, however, be able to satisfactorily explain away the charges of June; and, according to our usual custom of giving each side an opportunity of being heard, we shall be pleased to publish anything they may have to say on the subject.

If operators are only true to themselves, will only "pull together," and form a kind of hope-for-the-best-but-prepare-for-the-worst combination for mutual protection, with no intention of striking, yet strong enough not only to strike, but to hold out, should necessity demand it, the Western Union will find that it has made the same mistake as did the farmer, who, wishing to halter a fractious horse running at large in a field, thought to deceive the animal and accomplish his purpose by stratagem. As the story goes, he tied the end of the halter secretly around his body, and then, hiding it behind him, and bearing a bountiful supply of oats in his hand, approached the beast with cautious steps. Finally, getting near enough to pat the horse on the neck, he soothed him a few moments, and then suddenly producing the halter, clapped it over his head and secured it in a moment. As soon as the horse discovered that he had been tricked, he started on a wild run, dragging the farmer over stones and through brambles until he was nearly killed. Having been rescued and restored to consciousness, the farmer said: "The horse hadn't run fifty yards before I saw where I had made a mistake."

We are pleased to learn that Mr. Barron's flexible key-knobs and covers are meeting with an extensive sale. He publishes in the advertisement to-day testimonials from H. H. Kelly, Fred Catlin, and J. B. Gaynor, which show the high opinion entertained of them by these well-known operators. They are certainly shown to be of great assistance to those who are suffering from any form of telegraphers' paralysis, and their use in time would doubtless prove an entire preventative of that serious malady. Those who have not already ordered one, should do so at once, and try them. They are cheap, and if one once "loses his grip," he will soon spend a dozen times their price trying to get cured.

Ex-Gov. E. D. MORGAN, a wealthy and influential director of the Western Union Telegraph Co., the holder, it is said, of a million and a half of its stock, and who lately bought the Erie Railroad at six millions, got his first start in buying a canal-boat load of grain. He used to sweep out a store at \$1.25 per week.

THE Continental Telegraph Company began stringing the wire on their Philadelphia line May 29th. Poles are erected for about seventy miles. The company expects to be ready for business about the first of July.

AN interesting article by Q. Cumbers on the hard luck of Brian Boru will be found in this issue. We should be glad to hear from this correspondent oftener. We hope also to hear from Arty Brace again.

WESTERN UNION is quoted at 83½, and A. & P. at 23.

Answers to Correspondents.

A CORRESPONDENT wants to know what an ohm is. It is a unit or measure of resistance adopted by electricians, and named after Ohm, who first ascertained the laws of electrical resistance. The ohm is a measure of resistance in the same way that the yard, inch, or mile, is the measure of length.

By answering this question you will confer a favor: "Is it unhealthy to sleep in a room 15x15, in which are 125 cups of gravity battery in use."

XENIA.

Ans.—The battery may not produce any unpleasant odor, and it may possibly not be unhealthy to sleep in the room with it. We should be glad to have an opinion from some one conversant with the subject, but where so important a matter as health is concerned, we should be inclined to be on the safe side, and not risk sleeping in the room if it were possible to sleep elsewhere.

Several correspondents having written for information in regard to the phonograph, we would say that the Phonograph Company, 203 Broadway, informs us that the instrument is not for sale, and that agents have been appointed in every available inch of territory throughout the country, beside which there are over seven hundred applications still unattended to. Agents pay a royalty of one-fourth the gross receipts for the privilege of using the phonograph, which is neither sold nor leased, at least not at present, except to these agents.

Themes for the Thoughtful.

The stars shine at night, so hope brightens the darkest hour.

Noble thoughts, noble living; underlie all noble doing.

God loves your fault mixed with penitence, more than your virtue seasoned with pride.

Self-love is a medium of a peculiar kind; it magnifies everything which is amiss in others, at the same time that it lessens everything amiss in ourselves.

If you have talents, industry will improve them; if you have moderate abilities, industry will supply the deficiencies. Nothing is denied to well-directed labor; nothing is ever claimed without it.

There are some elements of holy character which can be acquired only in trouble. The beautiful graces of resignation and sympathy can grow only in a soil through which has passed the plowshare of affliction, and which has been watered by the rain of tears.

Death of Professor Henry.

Prof. Joseph Henry, of the Smithsonian Institution, died in Washington, May 13th. The Professor had been identified with the advance of original investigation in physics in this country for so many years as to rank among the pioneers of American science.

A meeting of the telegraphers of Washington was held in that city May 14th, to take action on his death. Mr. Geo. C. Maynard was chosen chairman, and Mr. W. H. Young secretary. Appropriate remarks were made by Messrs. Maynard, Whitney, Ives and others, and resolutions passed testifying to the patient and unremunerated labors of the deceased in raising the electro-magnet from a philosophical plaything to its present position as an agent for the transmission of intelligence around the world, over continents and under oceans, for nations and for individuals, controlling commerce and increasing domestic happiness, and standing foremost among the triumphs of modern civilization. He had an exalted appreciation of the dignity and honor of the science of telegraphy, and was himself a living example of the patient experimenter and utilizer of electro-magnetism, industriously toiling while others were enriched by his labors.

Prof. Henry displayed great interest in telegraphers. When the old National Telegraphers' Union was in existence in Washington, he used to frequently appear before the association and deliver lectures on electricity and other subjects pertaining to telegraphy, giving the members valuable and instructive information. The funeral was very large, and probably the most solemn and impressive ever held in Washington. It was distinguished by the entire absence of everything like show and parade for the sake of display, but was a funeral where simplicity, earnestness, and brains predominated. Eminent men of nearly every profession were present. The different telegraph departments of Washington were very well represented, with the exception of the Signal Office. The absence of the latter created considerable surprise. Almost one of the last acts of Prof. Henry was to subscribe twenty-five dollars for the relief of Mr. Henry J. Rogers, of Washington, who has held prominent positions in several telegraph companies, but is now in destitute circumstances.

Joseph Henry was born at Albany, N. Y., Dec. 17, 1797, and had consequently completed his 80th year. Educated in the common schools of his native city, and in the little academy which Albany at that time supported, he was subsequently appointed a Professor in the institution from which he had just been graduated. This was in 1826. It must be remembered that at that early date Morse had not yet dreamed out the details of the telegraph; indeed, it was at a date nearly ten years later that the penniless artist used to buttonhole his friends in Sandy Welsh's cellar and talk over his invention, while they wondered if he was really mad. In reality, however, the electrical inquiries of the young Albany Professor had already demonstrated the practicability of the transmission of messages by electricity, and Morse, with the quick fancy incident to his nature, had only grasped the bearing and mentally applied the inductions of another and more scientific, though perhaps less imaginative, intellect. The death of Morse, and the lack of documentary evidence, render it impracticable, at this lapse of years, to determine between the claims of Morse and Henry as concerns the invention of the telegraph. The latter had certainly demonstrated the principle of science upon which the invention rests before Morse conceived and executed his plan.

Although the electro-magnet had been long familiar as a mere scientific toy previous to Prof. Henry's investigations, no attempt to develop its capacity as a philosophical instrument had been made, and it had remained for years what it was at the beginning—an instrument for popular class and lecture illustration, in which a feeble magnetism was excited or generated by electrical currents of low intensity and short circuit. The idea of developing in soft iron a high intensity of magnetism, and of transmitting magnetic phenomena to a considerable distance, was original with Prof. Henry. The means employed by him to carry out this idea seem simple at this day, when electrical science is tolerably well understood, and the telephone and phonograph have still further developed its capacity. But their success was at that time an untried problem, the solution of which resulted, under Prof. Henry's manipulation, in producing the first electro-magnet on record, an exceedingly important invention which the ingenuity of subsequent electricians has not been able to modify or improve in any material degree. In 1824, Barlow had already pronounced the idea of an electric telegraph to be the conception of a Utopian's

brain, and his dictum, celebrated as he was, probably postponed the realization of the scheme for some years. Prof. Henry was not satisfied to accept Barlow's view, and it was his demonstration of its fallacy that again directed invention to the practicability of transmitting messages by electricity. The difficulty of exciting magnetic energy at a distance with the instruments then in use was the special fact that led Prof. Barlow to venture a statement which, in the light of subsequent events, appears absurd. But its absurdity was not shown until Prof. Henry, in the course of his experiments, successfully overcame the objection. This was accomplished by using an intensity battery at one end of the circuit, and by constructing the receiving magnet, at the other end, of many turns of a single wire. As a corollary to this important discovery, it was shown by experiment that the difficulty, until then regarded as insurmountable, of powerfully magnetizing a large bar of iron by means of a quantity battery, was completely obviated by surrounding the bar by many helices, forming separate short circuits; while, on the other hand, if the wires composing the helices were so connected as to form a single continuous circuit, it required an intensity battery to produce the result. The invention by Prof. Henry of the intensity-magnet, which first rendered the telegraph a possibility, ensued as the logical consequence of the preceding demonstrations; and that the idea of applying his invention to telegraphic uses had already occurred to the brilliant young electrician, is evident from a communication which he published in the *American Journal of Science* in 1831, five years after he was appointed Professor. After describing his experiments in detail, he directs attention to the practicability of applying the intensity-magnet to the transmission of messages at long distances.

It was in 1831, indeed, that Prof. Henry produced and exhibited the first contrivance ever invented for producing and maintaining continuous motion with electro-magnetism as a motor. This contrivance, says an eminent electrician, though very simple in its form, involved the essential principle of every electro-magnetic battery that has been devised since, namely, that of pole-changing, a principle the discovery of which must be added to the long list of his early triumphs. The young Professor's next venture was the construction of a contrivance for making signals at a distance by means of electro-magnetism; but these signals were produced by means of a lever impinging upon a bell. This contrivance was exhibited at Albany in 1831, and was operated by an intensity current sent through a mile and a half of insulated wire carried by successive turns around the walls of a room in the Albany Academy—a room that should have been preserved as historic, since within it was witnessed by a class of students the first electric telegraph ever constructed. Had Prof. Henry added to this demonstration the simple method of recording signals invented by Morse—had he, in other words, elaborated and applied a telegraphic alphabet, there would have been nothing left for the latter to accomplish. But he appears to have stopped just short of that, thus leaving to his compeer the honor of an invention upon which the practical efficiency of the whole demonstration depended. With the same strange obtuseness to practical relations, the real inventor of the telephone exhibited in a room in Pine street, in 1861, before Reis or Bell had elaborated their respective inventions, an electrical contrivance, anticipating those inventions in the important particular of transmitting vocal messages by means of a vibrating disk connected with a magnet; but, in patenting the same, omitted to cover the only valuable point of the contrivance in his specifications. It is still in existence, however, and worth an inspection as the first telephone ever constructed. The curious fact is that men of such acute intelligence and such daring originality should so often tread upon the very verge of a practical application, and yet miss it, as Prof. Henry did in the class experiment just described.

In the same year (1831) he produced another striking illustration of the practical capacity of the intensity-magnet. This consisted in producing momentous effects at a distance, by causing heavy bodies to fall in consequence of the interruption of electric currents. For this purpose he had to construct electro-magnets of enormous power; and his papers in the *American Journal of Science* having already given him a high reputation at Yale College, he was invited to visit that institution and to perform a series of experiments in the presence of the students. This invitation was accepted in the latter part of the year 1831, and Henry's electro-magnet, capable of sustaining a weight of about 2,500 pounds, constructed during that visit, was for many years one of the marvels of the institution. A few weeks later he

constructed a still more powerful one, capable of sustaining 3,600 pounds, for the College of New Jersey. It occupied the space of less than one cubic foot.

Alleged Addition, Division, and Silence in the Chicago Office.

It is not among the least unfortunate symptoms of the times that a large proportion of those whose star of fortune has led them into official positions, are yielding to sentiments of robbery, with the long train of deceptions, misrepresentations, and frauds which follow in its train. Here in Chicago we have a glaring case of this kind, perpetrated at the expense alike of the honest stockholder and the deserving operator.

In the summer of '76, Jno. P. Kerns, an operator employed by the W. U. Co., was detailed to work for the G. and S. Co., filling a vacancy caused by the resignation of Mr. Burch. Kerns held this position for a month, at the expiration of which he signed the W. U. pay-roll for \$40, and under a threat of dismissal was compelled also to sign the G. and S. pay-roll for \$75, turning the latter amount over to Manager Maynard. Mr. Kerns' name is given in full, because he is now (being out of the service) beyond the power of official execution blocks.

A young man, an operator still in the employ of the Company, has signed the W. U. pay-roll for seven months at the rate of \$45 a month, when he in reality received but \$30. Another, working as an extra man last summer, was earning \$65 a month, but, according to the "peculiar" mathematics of the management, signing the pay-roll for \$75. Two lady operators for several months have signed the pay-roll for \$35, and only received \$30.

The manager of the Metropolitan lines unhesitatingly draws \$60 a month from the W. U., when he does not, if he could, perform sixty cents worth of service. Young Catlin draws \$40 a month for dealing out pens and pencils to the day operators, while night manager Springer performs the same duty at night without extra compensation.

A year ago last summer quite a number of operators took vacations—some being absent a month, some longer. On their return they were compelled to receipt the pay-rolls for their full salaries without any deduction being made for the time they had lost, though they themselves were not paid for it.

Mr. Cobb requested Mr. King, an operator, to sign the pay-roll for the full month, when he had worked but twenty-four days. Upon Mr. King objecting, the pay-roll was altered to read twenty-four days.

For an indefinite period the figures in both columns headed "time" and "amount" have been written either entirely or partially with a lead pencil, and afterward the amounts have been raised to various higher sums. In one instance the raise was from eight dollars to eleven. In another it was for four months from two dollars to eight dollars. Messrs. Jones and Maynard have worked extra under assumed names, and to the exclusion of needy operators. These gentlemen did so, of course, at the rate of their salaries, and were allowed to reckon their own time.

And thus we could enumerate many more similar cases, but through a consideration for your space, and a belief that "a word to the wise is sufficient," we refrain. These facts, which warrant the above statement that sentiments of robbery pervade official circles, have been known for quite a while to those who are not "mere machines," and only a spirit of commendable magnanimity toward men who have hitherto deported themselves honestly has delayed their publication.

The fact was patent to every observer who had aught to do with Col. Wilson's so-called investigation, that he studiously endeavored to "whitewash" at least five others, who are more criminal, at the expense of Mr. Cobb. We do not aim to palliate Mr. Cobb's criminality, or sympathize with him in his misfortunes. Yesterday he might have stood against us, as do his guilty associates, but to day there is no one so poor as to exert themselves to secure him another position. And yet, his superior officers, under whose orders he robbed himself of his good name, now sit in judgment upon him, and to shield themselves pronounce a penalty they themselves richly merit.

The sudden and unexpected death of Mr. Orton has distracted Gen. Stager's attention from this subject, and given the guilty an opportunity to "cover up their tracks," but an abiding faith in the General's inherent honesty and justice reassures us. The interests of the Company and the employés call for protection—the one against purloining its earnings, and the other against giving their signatures to a

falsehood. It is with feelings of admiration that we note the actions of Mr. Springer in this matter. Behind his gruff exterior there is an uncompromising sense of honesty and justice, which scorns the palsy means by which some men acquire wealth and position. An official may, with distressing frequency, permit himself to be taken home by one of his employés in a state of intoxication, or he may secure passes for another official and a common woman to New York, and go unwhipped of justice; but just how he and those officially associated with him can rob the Company and its employés, and still remain secure in their official positions, is a question with their conscience (?) and their superior officers. In the language of "Argus," "Should any of those mentioned in this letter demand substantiated details of implied or declared offences, they will be forthcoming." JUNO.

CHICAGO, May, 1878.

The Edison Quadruplex Suit.

Judge Blatchford, in the equity branch of the United States Circuit Court, heard arguments May 14th on demurrers in two suits involving the right to use the automatic, and duplex and quadruplex systems of telegraphy. The first suit was brought by Thomas A. Edison and George Harrington against the Atlantic and Pacific Telegraph Company and Jay Gould, and involves a claim by the plaintiffs individually and as trustees for about \$4,000,000. It appears that in December, 1874, Gould entered into a contract in writing with J. C. Reiff and John McManus, who were interested in the inventions in question, to the effect that the parties thereto would use their best efforts to bring about a sale of the patents to the Atlantic and Pacific Telegraph Company for 40,000 shares of the stock of that company, of the par value of \$4,000,000. It was afterward agreed that the shares should be so apportioned that 31,800 shares should be allowed for Edison's inventions, and 8,200 shares for some other telegraphic rights conveyed to Gould. Mr. Harrington, being sick and about to leave for Europe before authority to issue the stock could be obtained, executed a deed of assignment of the patents to Jay Gould, dated April 9, 1875, and placed it in his hands with written instructions not to deliver it to the Atlantic and Pacific Telegraph Company until he (Gould) should receive the 31,800 shares of stock for distribution among the parties entitled thereto. Edison was one of those parties, and was to receive 8,000 shares. At the same time, Harrington sold to Gould the shares that he was to be personally entitled to under that division, and received \$25 per share for the same, it being assumed that the optional right of the company to make the purchase would be exercised. The deed of April 9, 1875, was for the nominal consideration of \$1. Gould placed it on record in the Patent Office in his own name so as to appear to be the owner of the patents. The bill alleges that the Atlantic and Pacific Company refused to make the proposed purchase on the terms mentioned in the memorandum of December, 1874, and refused to make any other proposition, and yet insisted on claiming the title under the deed of April 9, 1875. On the argument of this demurrer the defendant's counsel insisted that the bill could not be maintained by Harrington and Edison, as holders of the legal title in trust, because Harrington had sold his expectant share of the stock, which would have been issued to him personally if the Atlantic and Pacific Company had exercised the optional right of purchase. To this it was replied that the Atlantic and Pacific could not keep its property on the strength of the abortive propositions for the sale to them; that they were liable as infringers of the patents, and that complainants are entitled to a decree as prayed; that no title passed by the deed to Gould. The court overruled the demurrer.

The case of George Harrington and Thomas A. Edison against the Western Union Telegraph Company and George B. Prescott was next called and argued. This is a bill in equity to establish the title of the complainants to Mr. Edison's inventions in what is called quadruplex telegraphy, which is the subject in controversy in other suits in the Superior Court of New York, in which the Atlantic and Pacific and the Western Union Telegraph Companies are rival claimants for the same inventions. This bill ignores the claims of both companies, and insists that the title, legal and equitable, is in the complainants in this case, and prays for an injunction to restrain the Western Union from infringing a patent granted to Edison and Harrington on April 27, 1875, for the principal invention made by

Edison in quadruplex telegraphy. The defendants demurred to the bill on the ground that Prescott should not have been joined with the Western Union, it not being alleged that he infringed the patent in question. To this it was replied that the bill alleges that the company claims title to that patent under a deed made by Edison to Prescott, dated Aug. 19, 1874, and under an alleged sale by them to the Western Union, and that, as the Western Union claims title under Prescott, it was proper to make him a defendant, the object of the bill being to obtain a final decree establishing the title of the plaintiffs as against the title claimed by the Western Union under the deed to Prescott. The court overruled these demurrers also.

An Important California Consultation.

In accordance with previous arrangement, the operators on the line of the C. P. R. R., between Sacramento and Oakland Wharf, seated themselves at their instrument tables, in their respective offices, at nine o'clock on the evening of Easter Sunday, for the purpose of deliberating upon the numerous shadows that now darken the telegraphers' horizon, and to develop, if possible, from the united wisdom and suggestions of so many sage minds, some remedy whereby their afflictions might be lightened, and their ultimate extinction averted. The Sacramento end of the wire was "grounded" in order that there might be no W. U. official to take notes. As it was the hour that the chief at the Wharf usually devotes to fishing in the bay, the "boys" were likely to have an unmolested "shake," which they did. The most elevated operator being "Nh," he was, by unanimous consent, chosen chairman. On assuming the chair he said:

"Brethren of the magnetic tie, I will not waste our valuable time by extended thanks for the honor you have conferred upon me, but proceed at once to more important matters. In THE OPERATOR of March 1st is an article entitled "Consumption Among Telegraphers." It is there stated that sixteen out of every eighteen die annually of consumption; or, to enlarge the comparison, sixteen hundred operators are annually destroyed by this fell disease, out of every two hundred that live. The scientific author, after a very elaborate and learned dissertation on the subject, suggests, as the only remedy for this simoom among operators, the institution of a new class of telegraphers, by crossing the California plug with the tariff chief."

"X" answered in a spluttering, mumbling style, that betokened great excitement. He said: "I brand that proposition, or assertion, as a libel on California operators. Plugs! Who ever heard of a plug operator in California? I move that the originator of this cure for consumption be voted a leather medal."

"Sn" seconded the motion, which was put by the chair and carried unanimously.

"N" said that when consumption was once contracted there was no cure for it. The only salvation for us was to avoid it, and there was only one way to do that, which was for the Company to grant each operator one month's vacation every year, with a free pass to some noted watering place, salary to continue during vacation.

"Nonsense!" exclaimed "G." "You might as well expect the blessed sun to turn into a mint and coin the new dollars at the rate of a million a minute, as to harbor the thought for a moment that the W. U. Co. would ever entertain so philanthropic an idea."

"Ni" said that "telegraphers' paralysis" was another complaint or disease of an alarming nature, which demanded our wisest counsels. He was in favor of adopting the Phillips' alphabet. He believed it would alleviate, if not entirely eradicate, the disease, and prevent any new cases in the future."

"B" said he favored the adoption of the Phillips' alphabet, if for no other reason than for that alone of avoiding errors. As to telegraphers' paralysis, he believed nothing short of a revolution in the relations of capital and labor, and capitalists and laborer to each other, would grant us relief. The Phillips' alphabet might lighten our labor, but soulless corporations would increase our burthens correspondingly. The interests of employer and employee should be mutual, and the best way to bring about this state of affairs was to increase the circulation of THE OPERATOR, and disseminate its principles throughout the land.

"Mu" said that in the general concern for our physical health we should not neglect our empty pockets. He would like to hear some one suggest a

relief for those whose salaries are subject to gradation.

"Kn" said that he thought a petition should be presented to Congress, bearing the signature of every operator in the United States, praying that body to enact a law so regulating the "sliding scale" and "gradation" scheme that all the officers of corporations should be subject to the same conditions as those they would impose upon their employés, both as regards capability and emoluments. "Splendid!" exclaimed "Nf." "Put my 'sig.' at the head of the petition."

"Gentlemen, I call you all to order," said "Mo." "You are crying before you are hurt. The railroad operators have no grievances to redress. Wherefore this waste of time and sympathy? Mr. Chairman, I move that this consultation be considered ended."

"Put him out! put him out! Squelch him, he is a gradationist," shouted several, and a scramble for circuit began which lasted several minutes. The chairman had just succeeded in restoring order when the chief at "Ort" returned from his fishing excursion, which put a quietus upon further discussion. SAMSON.

Chicago Notes.

Harry Garner is visiting friends near Cincinnati, expecting to bring back a bride. M. G. Chipman, one of the sufferers by the late reduction in the A. and P., has accepted a position with the W. U., at Milwaukee. Pete Cannon has accepted a position with the N. A. Co., at Milwaukee. Charley Mixer, an "old timer" well and favorably known, was married May 1st to Miss Shumway of the W. U. office. Peace, prosperity and happiness be with them always. "Doc" Dorchester has been transferred from night to day staff, and "Jim" Wright from day to night. Jack Null is in town, as are also Jack Thompson, Hank Cowan, and several others of the Macawber troupe. Mrs. Rogers has left to accept a position at Frisco, Utah. Bob Hayes has gone to Burlington, Iowa, for a month. Charley Kinneman has returned from a vacation. Miss Snell has been transferred to Louisville duplex, days. Bob Glass, an old timer, is visiting friends here. He was night manager at Cincinnati, and went out with the boys in the strike of '70. Charley Cloud has gone to Des Moines to remain for a month. Ned Murphy has left for the east on a vacation. M. Doherty goes to the Hoosier State for a short vacation. Harry Whalton has left for Buffalo to visit some relatives. The provident ones, as summer approaches, are making preparations for a season of recreation—an excellent remedy for telegrapher's paralysis. The vote in regard to the proposed protective organization will show a large majority in its favor. Discussion of the subject develops a warm feeling in favor of the scheme, and after an intelligent and dispassionate consideration of the subject in all its various aspects, will demonstrate that the Chicago telegraphers are alive to their interests, the advice of the *Journal* to the contrary notwithstanding. The Board of Trade Telegraph Co. has removed its office to the large and commodious rooms in the rear of the A. and P. office. The office is conveniently and handsomely fitted up. The operating force consists of A. C. Knapp, Manager; A. G. McCabe, Chief; Ed. Foote, Jas. Layman, Fred. Lenhart, Henry John, E. B. Ludlow, "Hi" Waters, Tom. Dudley, J. M. Long and Ned Murphy; work, 9.30 to 1 trick.

The Directors of the proposed line from here to Milwaukee hold a meeting the coming week to let the contract for building, electing a Superintendent, etc. We learn that the canvass for the several places is an active one, confined principally to W. U. men. Why does the W. U. management violate the common rules of respect by repeatedly reading employés' postal cards, and scanning all mail matter in the office letter-box? Do they fear a league, or is it the story over again of a guilty conscience?

The Western Union office, inside and out, is very tastefully draped in mourning for President Orton. Though few of the operators here knew aught of the worth of Mr. Orton, none are unwilling to concede his great executive ability, as evinced by the wonderful growth and prosperity of the corporation of which he was the executive. From the representations of those able to speak of his friendship for the operators as a class, we all lament his untimely demise, and tremulously await the future policy of the new executive. XERXES.

Albany, N. Y., Notes.

The Legislature having adjourned *sin die*, Mr. Clarence Miller, of the capitol office, has returned to the main office. The former office will be kept open for a while in charge of Miss Lottie Wooley. Mr. Orville Coats, who held the position of operator in the main office for the past eight years, has resigned. His place is being temporarily filled by Mr. F. Scott Smith. In Mr. Coats the Co. loses a faithful servant, while his *confines* lose a genial companion, and he may rest assured that he has the hearty good wishes of all his old associates. Mr. Frank Bunce, of Saratoga, has accepted a position in Union Depot office, this city. It is understood that the A. & P. will close up business in Albany June 1st, and that the wires will be transferred to the W. U. office. Manager Sewall of the American District and the Bell Telephone Co., is having a new office fitted up at 468 Broadway. It will be ready for occupancy about June 1st, and judging from present appearance it will be without doubt the finest telegraph office in this section of the country. The room is very large, being seventy feet deep, and finished in a very handsome manner. Nothing will be left undone to make each department complete in itself. The Telephone Co. has its circuits extended to Troy, West Troy, Waterford and Loudonville, and everything points to its being a success. If all that we have read regarding salary grading in other offices, saving to the Company, &c., be true, then we can say that Albany has been very fortunate indeed, for, thanks to Supt. Brown and Manager Rugg, the grade here gives entire satisfaction. The Company saves nothing, the old pay-roll and the present one footing precisely the same. The amount taken from the higher salaries has all been added to the lower.

X. Y. Z.

Echoes from 197.

Fred. Catlin has been appointed acting chief operator, *vice* Griffin resigned.

Chief operator E. A. Leslie, whose duties heretofore have been of a clerical nature, has been detailed for duty at the switch.

E. A. Sink, of the night force, has been officially appointed chief operator. He has been acting in that capacity for some time past.

The Western Union Telegraph Company's steamer, William Orton, went down the bay May 27th, for the purpose of connecting the Hospital ship with the Atlantic cable.

John Lenhart, recently in the New York Stock Exchange, has taken a position with John H. Starin, the great steamboat and railroad proprietor, at pier 19, North River.

A double scull boat race was rowed on the Harlem river Saturday, the 25th inst., by W. B. Waycott and F. W. Cushing, and Thomas Brennan and R. A. Empey, all of the W. U. night force. The distance was 1½ miles. The race was won by Waycott and Cushing in 11 m., 45 seconds, beating their opponents 32 seconds.

Chief operator, S. L. Griffin, has resigned his position in the W. U. main office, to enter the service of Thomas A. Edison. For several years past Mr. Griffin has had charge of the Eastern wires, and by his even temper and courteous manners had won the friendship and respect of his operators, who, while regretting his departure from among them, heartily offer their congratulations upon his improved prospect in life.

Dashes Here and There.

Mr. Edison, the inventor, it it said, begrudges the time he is forced to devote to eating. He should invent a machine to eat for him.

Edison has perfected a fog-horn that can be heard ten miles, but when it comes to an invention for getting his hired girl up in the morning he smiles sadly and falls to musing on the infinite.—*Utica Observer*.

A dispatch from Ottawa, Putnam County, Ohio, says that a fire, last Saturday morning, destroyed eight or ten buildings including the railroad depot and telegraph office. The loss is \$25,000; fully insured.

The wonderful success of the telephone is all owing to the fact that you can attach one end of it to a mule's ear and swear at him in seven languages without running the risk of getting kicked.—*Philadelphia Chronicle*.

EDISON'S AMBITION.—When Edison was a telegraph operator in Cincinnati in 1865, his ambition was to be a tragedian. Richard III. is said to have been his favorite character, and whenever his duties in the office permitted, he would arise from his instrument, hump his back, bow his legs and proceed with "Now is the winter of our discontent," to the great amusement of his fellow-operators.

An electrician, of this city, has invented an improvement on the telephone, which he calls the "kissograph." It works on a principle of magnetic attraction, and by its means an absent husband can kiss his own wife at a distance of a thousand miles. To make use of it for kissing another man's wife disarranges the instrument, and creates a current which sets the steam whistles to blowing and the fire bells to ringing.—*Austin (Nev.) Reveille*.

Mr. Sivewright, the superintendent of telegraphs at Cape Colony, suggests that the proposed telegraphic line through Africa, after leaving the colonial system at Kimberley, should go to Tete, on the Zambezi, thence, by way of Livingstonia, on Lake Nyassa, to Zanzibar. He thinks the line could be constructed at a cost of \$1,000 a mile, and that if the change of direction he proposes be adopted the revenue will be large.

Since Edison invented the telephone and phonograph he has more orders for new inventions than he can attend to. One party wants him to invent a boneless shad; another asks him to turn his attention to a gas meter that won't always lie in favor of the company; a third desires a pocketbook that will always contain a dollar or two; and while he is about it he might as well infuse some of his inventive genius into a flight of stairs that won't creak like all possessed when a man sneaks into the house at midnight.—*Norristown Herald*.

At New Orleans, April 27, Garrett Winter, telegraph operator of the Good Intent Tow-boat Line, appeared before the First Recorder's Court on an affidavit made by J. W. Black, charging him with refusing to send a telegraphic message on which charges were offered to be paid. Testimony was heard and the case argued at length. Judge Smith sent Winter before the First District Court under \$500 bond. The Tow-boat Company claim that theirs is a private line, and they have a right to refuse to transmit messages for opposition tow-boat organizations.

The telephone is now claimed as the invention of an Italian mechanic named Manzetti, who had made a noted automaton, and in the fall of 1865 completed a device for the transmission of speech or other sound through a common telegraph wire, by a very simple apparatus. The claim is brought forward by a Professor Farinet, who says he is a friend of the late Manzetti, and states that the discovery was made note of at the time by "*Le Petit*" in journal of Paris, several papers in Turin, Florence, Genoa, Aosta (Manzetti's native place), and in the *Eco d'Italia* of New York.

PERSONALS.

J. D. Cowdrey has been appointed to a position on the night force at Kansas City, Mo., *vice* T. E. Wilson transferred to Union Depot night force.

BORDENTOWN, N. J.—Of the P. R. R. men here we have Geo. Dougherty as "extra." Will Foley holds forth at the P. R. R. in day time and Wyler at nights. Eddy Scott clings to the office at the canal locks, and Charles Suydam is home on a vacation for a few months. Of the Western Union Mr. Kelly has succeeded Mr. Zacharias to the management of the office here, the latter having been transferred to Camden. Mr. Ely takes a position with the W. U. shortly.

Mr. Edward C. Ranno, superintendent of repairs, Fourth (W. U.) District, died as his home in Leicester, Vt., Monday, May 13, from consumption. The funeral took place Wednesday noon, and was attended by the following telegraphers, who acted as pall bearers: Supt. Gates, H. C. Sherman, and J. N. Landon, of White River Junction; M. Magiff, and Mr. McArthur, of St. Albans; C. H. Holbrook, of Brandon, and L. G. Bagley and Mr. Lavery, of Rutland. Mr. Ranno, who for several years was repairer, stationed at Rutland, Vt., was promoted to be superintendent of repairs, to fill the vacancy caused by the resignation of H. N. Rowell, now superintendent telegraph, Eastern R. R.

PHILADELPHIA PERSONALS.—Night manager Zeublin has taken a month's leave of absence. Johnnie Maize is acting night manager in his absence. W. Higbee has gone to Atlantic City for the summer, and has given the boys a standing invitation to visit him. L. E. C. Moore has been transferred from the Continental Hotel to the pool rooms in Hoboken, N. J. Mr. Dyer claims to have perfected the optograph, but is chary of giving it to the public just yet. He says he will be happy, however, to show it to any of the fraternity who will call on him.

WASHINGTON NOTES.—Whoop-em-up Hahn has just been presented with an eleven pound boy, second edition. It was this same renowned artist who sat down to one of the Virginia Railroad wires, called up a way office and sent a message announcing the death of Mr. Orton. After giving O. K., the rural youth blandly inquired who the deceased was! Will Haight, formerly of the Arlington hotel office, has been appointed operator on the Government Department line at the Attorney General's office. Miss Marean was transferred from the Fifteenth Street office to the Arlington. Harry Lombard takes charge of the Fifteenth Street office for the present.

SANDUSKY BRANCH, L. S. & M. S. R. R.—At Martin are C. C. Earl days, and Applegate, owl; Graytown, L. B. Bailey and Murphy; Rocky Ridge, O. C. Stedman; Oak Harbor, J. T. Hiner and Lohr; La Carne, T. S. Urie and Lewis; Port Clinton, Miss Howard and Mr. Exley; Gypsum, A. B. Shaw; Danbury, B. T. Harford and True; Venice, J. T. Smith and Brooks; Sandusky, "Rh," Miss M. Young and Messrs. Russell, and De Forest; Sandusky Junction, O. L. Mullen; Perkins, W. F. Merion and T. B. Earl; Huron, J. H. Wright and Lawson; Ceylon, P. S. Shoupe, and Hitchcock; Joppa, Miller and Delano; Vermillion, Baxtime; Vermillion Switch, Scouton and Preston; Brownhelm, Gayly and Lewis; North Amherst, Miss Shoupe; Black River Switch, Frost and Bartlett. Mr. Wm. Khne, Jr. is supt., not Klein, as in last OPERATOR.

We have been anxiously expecting, with every issue of THE OPERATOR, another "Interesting Reminiscence" from the pen of the beautiful and accomplished (as we know she must be) Helen, but thus far we have been disappointed. We sincerely hope she will soon favor us with another nice story. Nothing very interesting or important has transpired in this part of the world lately. The N. O. and Mobile "Fast Line" are now running double daily trains through. Also daily "coast" and excursion trains to the numerous watering places of which that line can boast. Through the able management of chief operator and train master E. M. Wallace, everything runs smoothly and in "tip-top order." "W" is a master hand with trains. F. B. Maxon has lately left the W. U. at New Orleans. We are very sorry to lose him. Dr. T. Jeff Woolf, another first-class "Knight of the key," of N. O. office, lately graduated at the Louisiana State Medical College, and has been awarded the highest honors. We wish him much success in his new profession.

RIGOLETS, LA.

EXUM.

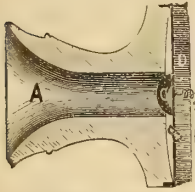
ST. JOHN, N. B., NOTES.—The only employees in this office affected by the "gradation" were the messengers, who were reduced from three to two cents per message. A duplex to Halifax was put up a few days ago. Charlie Dunham, with Caswell and Skinner, alternately work this end. The Dominion Tel. Co. moved into their temporary quarters, King Street, May 1st. They will extend their lines to the upper part of the province this summer. Snyder and Blizard are their operators in this city. Billy Miller, of the Montreal quod, has left for a three weeks vacation to his home in Ontario this week. Dick Waycott, well known to many readers of THE OPERATOR, is in the train dispatcher's office, Monoton. Geo. Woodward, of Salisbury, better known as "Qa," has resigned. Abe Sherwood succeeds him. Charlie Gilman, operator, Houlton, leaves for California June 1st. Mr. Herrin takes his place. Miss Stevenson is operator at St. Andrews, Geo. Patterson at St. Stephen, and Jack Buchanan runs McAdam Junction. R. B. Welch, an "old timer," is still at Woodstock.

DEATHS.

May 16, at Mauch Chunk, Pa., Mr. Wm. D. Fister, operator at East Penna. Junction, aged 18.

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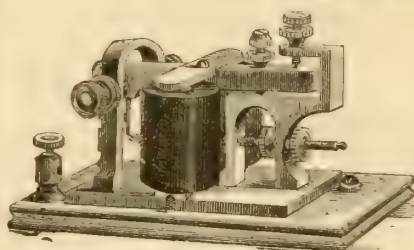
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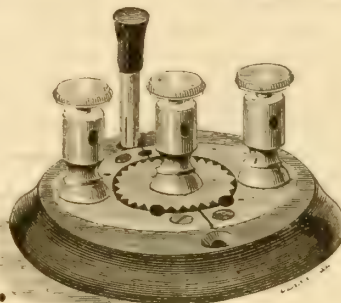


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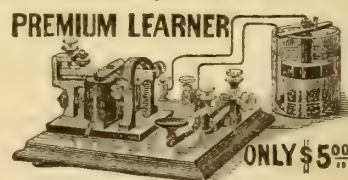
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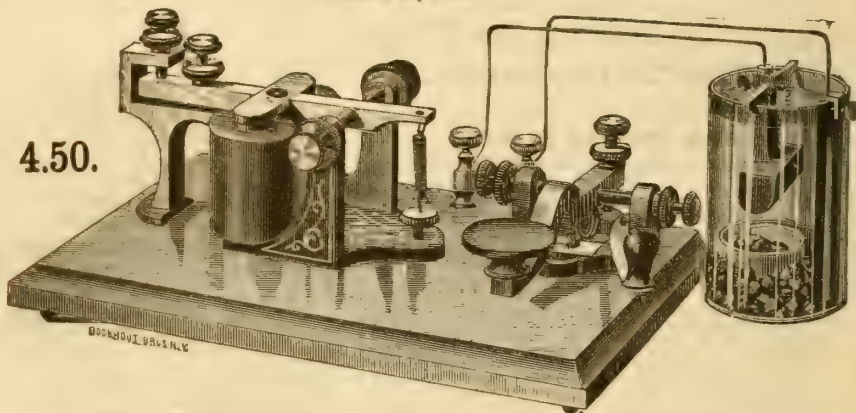
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VOL. IX.

NEW YORK, JUNE 15, 1878.

No. 12

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The Goodyear Patent Health Lift.

The apparatus consists of five pieces: the Lifting Board, mounted on small rubber balls; two heavy Rubber Tubes about a foot in length, and two detachable Handles. Complete, it weighs about 3 pounds.

It may be used in a standing, sitting, or reclining posture. When operated in a standing posture, the head should be held erect, and when reaching downward, the knees should be flexed, observing not to bend the spinal column, either backward or forward.

When exercise for the muscles of the back is desired, it is safer and pleasanter to employ the sitting posture. This position, likewise, gives great freedom for either limb or arm movements. By occupying a low stool or ottoman, the largest liberty is obtained for bringing into vigorous and harmonious action the muscles of every part of the body. The extremities are thus warmed, the circulation equalized, local congestions relieved, and the vital forces stimulated. The supine position favors deep breathing, and secures an alternation of complete rest with each expenditure of muscular effort.

Health Lift Complete, Price only \$5.00.

Sent, express charges prepaid, on receipt of price, to any part of the United States or Canada.

THE SECRETARY of the Telegraphers' Mutual Benefit Association, in his annual report, says that fourteen out of the sixteen deaths of members during the year were caused by consumption. This fell disease being the result of close confinement, lack of fresh air, and insufficient physical exercise, it surely behooves telegraphers to do what they can toward, as far as possible, counteracting the effect of long hours and close confinement. Everybody requires exercise, and probably telegraphers, bending over a desk for ten or twelve hours a day, stand more in need of it than any other class. We have introduced to the profession the Goodyear Pocket Gymnasium, an invention designed not only for lifting, rowing, and the like, but which also combines all the advantages claimed for the Health Lift, with such as are secured by the ordinary gymnastic exercises. These tubes, besides having a very large sale among telegraphers, have everywhere given eminent satisfaction. They are selling by the thousand among the general public, and are everywhere considered the best apparatus for physical culture in the market. This system of exercise is purely reactionary, the contraction of the elastic material securing the double pull, which is deemed so advantageous. The accurate graduation of the appliances, and their great range of power, adapts them alike to young and old—to the feeble as well as the stalwart. Here, then, is EXERCISE, and all that the name implies, in the most inexpensive and portable form. Here is the best method of accumulating strength and elasticity; of warding off disease; of securing that physical and mental tone which ever accompanies vigorous health.

Price List of Goodyear's Pocket Gymnasium.

No. 1.—For Children from 4 to 6 years.....\$1 00	No. 4.—For Children from 10 to 14 years.....\$1 30
No. 2.—" " " 6 to 8 " 1 10	No. 5.—" Ladies and Children, 14 years and up. 1 40
No. 3.—" " " 8 to 10 " 1 20	No. 6.—" Gentlemen of moderate strength..... 1 50
No. 6.—With handles, screw-eye, and hook.....\$1 75	No. 8.—For Gentlemen of extra strength\$2 50
No. 7.—Used by Ladies, Children, or Gents\$2 00	Goodyear's Patent Health Lift Complete.....\$5.00
Nos. 6, 7 and 8 are fitted with a screw-eye and hook, or \$ (5.00), make a Complete Gymnasium. Extra hooks, 5 cents each, or 60 cents per dozen. "BLOOD AND BREATH." By Prof. J. E. Frohisher, to accompany Goodyear's Pocket Gymnasium. Price 25 cents.	

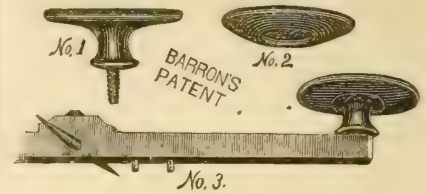
We send these goods to any address, post paid, on receipt of price.

W. J. JOHNSTON, P. O. Box 3332, New York.

SAVE YOUR GRIP!

Use the Flexible Key-Knob.

It Relieves the Muscles, and is pleasant to the Touch.



No. 1 shows a Flexible, Elastic Key-Knob, to be substituted for the present Hard-Rubber Knob. It fits any Key. No. 2 shows an adjustable, Elastic Cover. It will fit any Key Knob. No. 3 shows the Adjustable, Elastic Cover fitted to the Key-Knob.

Indorsed by the following well-known Telegraphers:

GEO. ANSON STAGER, Vice-President and General Superintendent of the Western Union Telegraph Co.
A. S. DOWNER, Gen. Manager of the New York office.
THOS. DOLAN, Night Manager of the New York office.
W. P. PHILLIPS, Assistant General Agent of the New York Associated Press. E. C. BOILEAU, G. F. STEWART, T. B. TALTAVAL, S. S. SCHROFF, L. B. MCCARTHY, Associated Press Operators. T. G. KENNEDY, J. B. GAYNOR, and many other W. U. Operators.

The following letters explain themselves:

A. S. DOWNER, MANAGER: The Flexible Key-Knob is a great success. I never had such easy sending as I have had to-night.
Respectfully, H. H. HENRY.

A. S. DOWNER, MANAGER: The Flexible Key-Knob materially improves "light" writing, and it unquestionably renders continuous sending less fatiguing.
Respectfully, FRED CATLIN.

MR. W. J. BARRON: After using the Flexible Key-Knob daily for more than a month, I must say that it is a decided success. It makes sending much easier, enables me to make letters with facility that have heretofore given me trouble, and is a great help in sending for a long period.
W. C. GAYNOR, W. U. Main Office.

PORTLAND, ME., June 3rd, 1878.

MR. W. J. BARRON: Dear Sir—Inclosed please find \$1.50, for which send me three No. 1 "Flexible Key Knobs." Our Duplex men say there is nothing like them, and I am satisfied they are just the thing for those like myself, that are afflicted with telegraphers' paralysis. Have tried one a few nights, and find it a great assistant.
JARED CRANE, W. U. Tel. Office.

The Elastic Key-Cover is in constant use on the Associated Press Wire and Fast Western Union Circuits, and is giving universal satisfaction.

Sent, post-paid, on receipt of Price. No. 1, 50 cents; No. 2, 35 cents. Canadians orders, 10 cts. additional. Postage Stamps taken. Address,

W. J. BARRON, Inventor,

P. O. Box 3,363, 197 Broadway, N. Y.

The best book for summer-reading is



By mail, postage prepaid, on receipt of \$1.50.

IMPROVE YOUR SPARE MOMENTS IN LEARNING "SHORT-HAND" STANDARD PHONOGRAPHY taught by Mail. All works on the subject constantly on hand.
For terms address A. E. CAPEN, 47 Grove Street, New Haven, Conn.

Clubs for The Operator.

For 2 Yearly Subscriptions, One Pack of Visiting Cards and Engraving of Prof. Morse.

" 3 "	" Copy of "Oakum Pickings."
" 5 "	" Copy of THE OPERATOR, 1 year.
" 6 "	" One No. 6 Exercising Tube.
" 7 "	" Copy of "Lightning Flashes."
" 9 "	" "Lightning Flashes" & "Pickings."
" 12 "	" OPERATOR, "Flashes" & "Pickings."
" 15 "	" An A 1 Sounder or Learner's Outfit.
" 18 "	" Goodyear Health Lift Complete.
" 24 "	" Health Lift and copy of "Flashes."
" 30 "	" A Nickel-Plated Relay but little used.
" 45 "	" A Splendid New Nickel-Plated Relay.

THE OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY

June 15th, 1878.

Volume IX.

Whole No. 104.

Be not the First.

Oh! be not the first to discover
A blot on the fame of a friend;
A flaw in the faith of another,
Whose heart may prove true in the end.

A smile or a sigh may awaken,
Suspicion unjust and undue,
And thus our belief may be shaken,
In hearts that are honest and true.

How often the light smile of gladness
Is worn by those that we meet,
To cover a soul full of sadness,
Too proud to acknowledge defeat.

And often the friends we hold dearest
Their noblest emotions conceal,
And bosoms, the purest, sincerest,
Have secrets they cannot reveal.

Leave base minds to harbor suspicion,
And small ones to trace out defects,
Let ours be a nobler ambition,
A nature that never suspects.

We none of us know one another,
And oft into error may fall;
So let us speak well of each other,
Or not speak of other at all.

Hc.

California's Leather Medal.

When Adam Beidler, Esq., of Chicago, asked Viola, last fall, why she nominated him for the handsomest man in the business, and she replied: "Why, Adam, because you *are* handsome." Beidy simply squeezed her lily-white hand, and with longing eyes expressed an insatiable desire for more. It is this inordinate longing for more, so natural to us all, that prompts me to bow my acknowledgements to my friends in the towns—that is to say, the side tracks, Y's and switches along the alleged railroads of California, who, as I learn from the last issue of our representative journal, have resolved unanimously to present me with a testimonial medal, modelled and executed by the best workmen in the leather trade. Although I must disclaim any particular merit in being the first of our profession to discover the vast advantages of a judicious "cross" between a California plug and one of Chicago's swarm of traffic chiefs, I feel, in the language of Sam Weller, that I am "swellin' wisely," for I am so happy to know that I have not lived entirely in vain. Their selection for the distinguished honor does them infinite credit, as it is the first example of a cis-Pacific testimonial of that kind, and, since the death of the late Ahkoond of Swat, I shall be the only living person recorded in history as the recipient of a solid leather medal. It is some years since I dwelt on the Pacific coast, but it is always with the deepest regret that I recall the highly polished vermilion and scarlet noses of the Californians of Lang Syne. My experience with those people has, however, convinced me of the futility of refusing anything which they may "resolve unanimously" to bestow upon you, for the large-hearted placer-miner, prospector, cradle-washer and quartz miner is bound to have his own way. He always digs to the bed-rock; always pans out in paying quantities, and even if it is only a medal of inferior leather which he offers you it will be duly assayed and properly marked, "Ninety three dollars to the ton." He is ever found in the fullness of what he thinks is his heart, ready to wager two-thirds of the company's funds in his possession, that he can make fifty-seven consecutive revolutions on roller skates without stopping, write poetry against Chinese, play poker and seven-up for the balance of the company's funds, make wheelbarrow bets with his fellow hoodlums on the result of a State elec-

tion, or do any of those peculiar California feats of superiority which are steadily teaching the benighted Chinese how to live like California Christians. Like his native mul—mustang ("twere base flattery to call it a mule") he is irresistible. When that interesting animal, like the remainder of the intellectual lights of that region, makes up its mind to do anything, it pursues its object with undying energy, and—to speak of them collectively—with unmelting unanimity. Thus, when its gymnastic feats of "bucking" fail to result in throwing its accomplished rider into the six feet of red sand which covers that alleged State, it turns its head, and without the slightest regard to the Eastern code of honor, deliberately commences to eat up the enormous feet, boots and all, of its gallant rider, and so invariably prevails upon him to come down, reluctantly, and be kicked.

In the face of all these facts it requires a stout heart to decline that which a body composed exclusively of Californians may unanimously resolve that you should have. Nevertheless, I deem it due to the profession that I should, as a mild sort of protest, at least, state the reasons why I ought to decline the honor.

In the first place, I do not desire a medal or anything else for my humble efforts, beyond what I have stipulated for. I do not write for vanity's sake, nor to pique Samson especially, nor to create dissension, but mainly because Mr. Johnston pays me a stipulated price for a given length of accepted composition; such as it is; and so open am I to bargain for lucre, that if the host of plugs, arch-plugs, and all the miscellaneous little pluggings of California will, instead of buying me a leather medal, club together and pay me a little more for not writing than Mr. Johnston pays me for writing, I will gladly accept their offer, and even rejoice to see the mind of Samson once more in a tranquil condition.

In the next place, the unanimous vote of "Nb," "X," "Samson" and "Xn," considered on its merits alone, lacks the cardinal merit of originality. The funny incident of presenting a leather medal is, next to the vile practice of making puns, the cheapest even if not the oldest kind of wit. It is an extremely old and dilapidated wreck, having been harped upon in lumbering phrases from time immemorial. The custom of sarcastically referring to leather medals has descended to us from the ancient Chinese (to whom the Californian is nearly related), and when such a hackneyed old joke forms the stock in trade of a modern humorist, it is clear proof of the re-appearance of that primitive talent which could adequately express itself in nothing more delicate or refined than tough sole leather. For my own part, I am progressive enough to sigh for something new in the funny business once in a while, anyhow. To object further: I own freely that there are worthier candidates than I am for the honor.

The W. U. Company has found by a long and sad experience that a California operator, sent temporarily to do telegraphic duty at some distant point, with permission to charge his hotel bill to the company, can eat more in a week than the receipts of his office would amount to in a month. Then there are the California plugs to be considered, with a view to retaining the medal in that State. The fact has been developed on the "Overland" wire (taking as a reliable basis the excuses given when breaks occur, and the receiver says "min.") that Sacramento office puts coal on the office fire seventeen times a night; forty-one bands of music pass the office before 10 P. M., and three hundred and eight customers come in after midnight. Now, the operator who can account for three hundred and sixty-one breaks a night as satisfactorily as that, is not to be sneered at as a candidate for the medal. Charity should begin at home, and it would be wrong for this California Wire Club to overlook the claims of their native artist who received the message informing a railroad conductor that "Dr. Over's hash is not food," and then protested that it was sent so, although the original message read: "Drover's pass is not good."

I would like also to call Samson's attention, as a literary man, to the fact that the original poem of "Beautiful Snow" was written by an operator—Henry W. Faxon; and that that "musical" instrument of excruciating torture, the concertina, was invented by a member of our profession—Sir Charles Wheatstone; both of which achievements will bid fairly for success in the contest for California's leather medal.

But to give Samson my own opinion, I prefer that the medal should go to one of our ponderous and highly original officials; and if, after I have

enumerated some of their qualifications, we do not hesitate about poking fun at each other as brother operators, and award the medal to a deserving officer, the fault will not be mine. Every operator must have noticed the enormous amount of brain-work involved in official efforts at discipline and economy, but few probably have closely watched the worryment and anxiety which it costs each chief to vie with his neighbor in hiring cheap labor, and to out-Herod Herod in penitential discipline; and, I think, when the story is told, that the medal will certainly go to some distinguished ornament in our official ranks. The first grand scheme in official economy which attracted the attention of the whole country was developed in Chicago, in 1868. During the National Republican Convention in that city, an ingenious chief invented the plan of establishing an office at the Tremont House, where the operator, in addition to bulling the delegates' messages, was sentenced to sell cigars, the proprietor of the stand paying one-half his salary, and the company the other half. There had been great jealousy and rivalry both before and after this period among officials striving to build up a reputation for economy, flint-heartedness, and downright effrontery, but this masterstroke on the part of Chicago stood alone in its celebrity for originality for many years. In fact, Chicago rested securely on this telegraphic-cigar business, and it was only when an ingenious eastern official invented the famous plan of fining operators a cent a minute for coming late, said fines to form a "slush fund" out of which should be defrayed the expenses incurred by the accidental breakage of lamp chimneys, shades, etc., from which the company had previously extracted at least five years' wear and tear. The success of this scheme, (by which the entire time of a hundred dollar man was taken up in keeping track of and collecting the average of eighty-four cents which accrued in fines every month) made the western officials very much dejected, for it was generally understood to be the professional opinion of celebrated experts in rank tom-foolery that no scheme for official discipline could ever be invented to beat this one. Other economists struggled hard, but in vain. The A. & P. Co. uniformed its operators in blue coats for office use, and made a slight shave off the tailor patronized by the operators; employes were docked four days pay in a month, to help pay expenses; Chicago came forward with fourteen superintendents, and thirty-one chiefs in a total of fifty-two employes, but the inventor of the cent-a-minute order only smiled with supreme indifference. In fact, so elated with their triumph did the eastern men become, that they not only exultingly held up their scheme for the envy of the western officials, but they freely, and with bitter irony offered odds of six to four—and in some cases two to one—that it could never be equalled in wealth of conception, economy, and wild, bold fancy. This state of feeling was maintained—both sides being too plucky to declare the bets "off"—until a desperate western official exlumed from the vast depths of his intellect the now famous scheme requiring managers to mention invariably the trivial matter of a subordinate's salary in any written communication he might make to such unfortunate creature. The east was thus thrown into consternation and despair, while the "short-ends" in the betting were correspondingly happy; and, although the east promptly improved upon the invention by writing the document in such a shockingly bad hand that "salary \$30" was the only legible portion of it, it was freely whispered that it had exhausted the varied and deep intellectual resources of the entire official ranks.

Years rolled on, and the betting, which had commenced at seven to five on the west, had advanced to fifteen to one, when a mighty genius recently arose in the east, and eclipsed them all. I now respectfully recommend him to the lights of the Pacific coast for their leather medal. He is the profound inventor of the SALARY GRADE. The western chiefs, who have lost all their money, are now in no humor to renew the contest, and, therefore, the poor operators will probably enjoy a rest for a while. Now, it is perfectly safe to say that a scheme which permanently "grades" the aggregate salaries only one way, and that downward, can never be excelled, and the gigantic brain of its author should not be allowed to waste itself unrecognized by leather medals from California.

However, if after considering all these rival claims, the operators of the C. P. R. R. still insist on thrusting by a unanimous vote the honor upon me, I will go (walk) out there to receive it. I can conceive of no greater honor than to be seated on the topmost branch of the Big Tree of Cala-

veras, hat in hand, leather medal on breast, blushing like the morn, and scattering smiles in boundless profusion upon an admiring crowd of enthusiastic forty-niners. WERNER.

A Morning with the Weather Observers.

The Signal Service, United States Army, Division of Telegrams and Reports for the Benefit of Commerce and Agriculture, is expected, in the language of Gen. Myer ("Old Probabilities"), Chief Signal Officer, to perform the following duties: "To give protection to commerce by warnings on all of the Atlantic and Gulf coasts of the United States, and on those of the lakes; to watch the river changes along their courses in the great river valleys; to note at seasons the temperatures affecting canal commerce; to carry telegraphic lines, by which meteorological reports may be had, over regions considered impracticable for such constructions; to maintain a system of connected stations on the seacoast; to take charge of the recognized system of voluntary meteorological observations on this continent; in addition to the regular system of the service; to secure the coöperation of foreign observers in foreign countries; to endeavor to aid directly all the farming population in the harvesting of their crops; and, finally, to put it in the power of every citizen to know each day, with reasonable accuracy, the approaching weather changes."

How is this done? For it is right to say that these expectations are met, and with continually growing accuracy.

In the first place, there is a thorough course of instruction given to those who are to be observers, both in military signalling and telegraphy, meteorology, and the Signal Service duties at stations of observation and report. This is done at the school of instruction and practice at Fort Whipple, Va. There were at this post, at the last report, seven commissioned officers, of whom four were under instruction, and forty-two enlisted men. There were on station duty, June 30, 1876, the date of the last report, 103 sergeants, 9 corporals, and 94 privates.

There are in the United States in all 171 stations, classed as follows: Stations making full telegraphic reports, 92; making observations and reporting by mail, 15; printing stations at which observations are not made, 3; special river stations, 23; stations on telegraph lines, 38. Reports are also received from seven stations in the West Indies, six of them making full telegraphic reports; and from sixteen British-American stations, all but one reporting by telegraph.

The average cost of maintaining each station of observation during the year, exclusive of the cost of the telegraphic service, and of the pay and maintenance of the men on duty, was \$424.03. It may be said here that the sum of the pay and allowances of the men scantily compensates for their continuous labor.

The duties of the enlisted men at each station are defined in the report as follows: "At stations forwarding telegraphic reports they are required to take, put in cipher, and furnish, to be telegraphed tri-daily on each day, at different fixed times, the results of observations made at those times, and embracing in each case: the readings of the barometer, the thermometer, the wind velocity and direction, the rain-gauge, the relative humidity, the character, quantity and movement of upper and lower clouds, and the condition of the weather." These observations are taken at Washington mean time, coming, therefore, earlier at some points and later at others, making simultaneous observations all over the country. There are also three observations to be taken at the local times, 7 A. M., 2 P. M., and 9 P. M. A special observation is also taken at noon each day, in part at least, to notice any instrumental changes that may require to be reported.

In addition to the reports in the papers there are also furnished daily to such post-offices as can be reached from convenient centres what are called the Farmers' Bulletins. New York, for example, prints and sends out 703 of these bulletins to as many offices as can be reached by mail not later than 2 o'clock, P. M., of each day.

With the increase of stations, and especially with the growing familiarity of the men of the service with their duties, it was to be expected that there would be an increase in the percentage of verifications of the "probabilities" or "indications." This has been the case. In 1872 the percentage of verifications was 76.8; in 1873, 77.6; in 1874, 84.4, in 1875, 87.4; and in 1876, 88.2. An average of 90 per cent. of accuracy is believed to be attainable. A series of tables shows that the annual average of disasters

to shipping has been lessened by a considerable percentage, for the years during which the display of cautionary signals has been made. While warnings unnecessarily given may delay the movements of vessels, yet a more heavy responsibility would be incurred if the warnings were not given when they ought to be.

The value to farmers of the bulletins, with explanatory notes issued for their benefit, has been very great, and so also the river reports have been of service to river commerce, and to the population in the vicinity.

The New York station of the Signal Service is away up on the roof of the immense building of the Equitable Life Assurance Company. It commands a superb view of the city and bay, and affords a place for the display of the cautionary signals where they are visible from all parts of the harbor. The lantern, displaying a red light, is 195 feet above sea-level; while the flag—red, with a black centre—floats from a staff at an elevation of 235 feet.

Here is the wind vane, which needs no description. And here is the anemometer, used to determine the velocity of the wind. By electric connections with ingenious but not complex machinery, this is a self-registering instrument. The train of wheelwork makes and breaks an electric circuit, which registers itself on the paper revolving by clockwork on the recording cylinder.

There is in the New York office a self-registering barometer. It is a rare and splendid instrument. One of the cylinders, which are revolved by clockwork, gives the register of the barometric changes for a day, and the other for a period of fifteen days. As in the anemometer, the connections between the instrument itself and the recording cylinders are made by electricity.

Both to save time and expense, as well as to insure accuracy, the telegraphic reports of the service are made in cipher. These ciphers are easily and quickly read by means of a book arranged for the purpose. Here, for example, is the cipher report of the observation taken at New York on a recent day: "York, Monday, Dead, Fire, Grind, Himself, Ill, Ovation, View;" which, translated, reads:

York: New York, (Station.)
Monday: 20.05. (Barometer corrected.)
Dead: 29.96. (corrected barometer for temperature and instrumental error.)
Fire: 70. (thermometer.)
Grind: 75 per cent. (humidity.)
Himself: west, fair, wind and weather.)
Ill: 2 miles, (velocity of wind.)
Ovation: $\frac{1}{2}$ cirrus clouds, calm, (upper clouds.)
View: 67. (minimum temperature during night.)

The Signal Service is an exacting one of the men engaged in it. It is a means of almost incalculable benefit to the country. From "Old Probabilities" himself, down to the privates, to the men in comfortable quarters in the cities, and to the men who winter on Mount Washington or Pike's Peak, the thanks of the whole community are due for their tireless service. There is nothing equal to it in any other part of the world, and we may well be proud of it.

The Proposed Protective Organization.

I have read with exceeding interest your editorials in late issue of THE OPERATOR, relating to the proposed Telegraphers' Protective Organization, as also the communications from correspondents. Your invitation to all engaged in the business of telegraphy to give views and "compare notes" has prompted me to offer my humble opinion, as a testimonial both to the high appreciation I entertain for the efforts you are so manfully, courageously, and undauntedly exerting in our behalf, and of the spirit of independence, self-reliance and manhood that yet exists in our ranks. Despite the oppression the monopolists have inflicted upon us, again and again; despite our present depreciated condition as a class (it was profession once); despite the successful efforts that have been made to get all out of us there is in us, for the least possible allowance, (I will not say remuneration,) and despite the fact that we have been humbled to the very dust, by the extremity of our necessities, there still remains within us some spirit, some soul that has not been wholly crushed. The resignation almost of martyrdom that has heretofore bided its time, knowing that it "is a long lane indeed that has no turn," now asserts that "though crushed to earth we shall rise again." My experience has been somewhat similar to that of "More Abon." I have realized what it is to be "graded" and be obliged to support a family upon the "scale." About 14 years of my life have been devoted to service of unappreciative corporations, and during that time what have I not

both seen and experienced. But let me caution the fraternity against a strike, except, as "Sentinel" observes, as the very last resort. Such methods of redress are only temporarily successful, and will but too surely recoil upon our own heads. But let us have an organization, and I say at once, The sooner the better. Let it be permanent, thorough, and complete, embracing everybody now in the telegraph service in subordinate positions. Operators, plugs, linemen, and those now out of the business who have ever been in it. Those occupying the "fat" places have suffered no wrongs, therefore need no redress. I would recommend the platform to contain a plank stopping the manufacture of plugs, thus leaving no second generation to usurp our places, which must then be appreciated, and thereby restore to us our rights and privileges. One to authorize the election of an Executive Committee, with full power to "grade" us according to our respective merits and abilities (which by record can very readily be obtained), who shall be the judges of the compensation we shall receive, of the requisite number of hours for a legitimate day's work, and many others which might be suggested. My very heart and flesh cry out for joy in anticipation of the prospective release from the bonds of oppression and tyranny that have so long and now so bitterly enslave us. No Sic.

I heartily endorse the sentiments expressed by "Key" and "Pip" in last issue of THE OPERATOR in reference to breaking up the home plug factories which are doing nearly all the damage, and I believe that nothing else has helped the various Co.'s in their "grading" more than these home plug factories. I speak from experience. I know of one man who has taught no less than ten students, nearly all of whom now hold positions; this he did without any pay or compensation whatever, excepting what office work they performed, he being too indolent to do it himself, spending his time and money in a manner that does not reflect much credit on the fraternity. He has, however, suffered from it himself, as well as all on the line, his salary having been reduced from \$55 to \$45, and very bright prospects for another reduction. If this only affected him we might all clap our hands and cry that it served him right; but such is not the case. The innocent are made to suffer with the guilty. Another feature that I notice, is as each one of his plugs become fully fledged, the last one out in every case gets a lower salary, although in no way inferior to the preceding ones, the last victim having just jumped into a \$30 job. Now, the question that agitates my mind is this: As he is only 35 years of age, he will, probably, yet learn ten more before he is called upon to give "an account for the deeds done in the body," which are many. What will that last man get for his compensation? (We certainly cannot call it a salary.) I am interested, as there are several others on the road nearly equal to him, and as my salary has been degenerating in exact ratio to the number of students graduating, who stand with mouth, eyes and ears wide open anxious to take my position for five dollars, or even ten dollars a month less than I receive (which, by the way, would not leave much for speculative purposes). Now, I am strongly in favor of a Protective Society, and gladly add my vote to swell the number, and I earnestly advocate a clause in the constitution or by-laws prohibiting any member from having any student under penalty of expulsion. We might make an exception in the case of a brother or sister, and even then the number should be limited. If there are those who cannot black their own boots, or clean a battery, it would be cheaper and better for all operators if the Association would allow them a small pension for such conveniences. There are plenty of boot blacks who need the money, without ruining the profession. If these few lines will be of any advantage toward advancing the interest of the fraternity, I will have relieved the conscience of a
DISTRESSED JERSEYMAN.

"Why do not operators form a Protective Association, instead of quietly submitting to sliding scales and the abuse of monopolies?" How often this question has been asked can be ascertained only by mingling with the fraternity. I think that I can say, without fear of contradiction, that ninety-nine hundredths of the thinking operators wish, from the bottom of their hearts, that some good leader would rise in their midst and guide them out of this wilderness of reduction. It does not require the gift of prophecy to foretell, with almost absolute certainty, (the successful issue of a second Protective Association. The experience of the past is of incalculable advantage. We now know

the rocks and shoals and will undoubtedly stear clear of them. In forming this Association there are three absolute essentials, viz: money, numerical strength, and that every member should be allowed a voice in the proceedings of the Association. Estimating the telegraphers at ten thousand, and presuming, of course, that they are willing to assist themselves, if we made the initiation fee one dollar, and monthly dues at 50c. we should have the first month,

For initiation.....\$10,000
For dues.....5,000

Total.....\$15,000

In twelve months we should have the handsome sum of \$70,000, not to mention the interest, which, reckoned at 6 per cent., would be amply sufficient to defray all expenses. In two years our treasury would stand, after defraying all expenses, \$140,000. Is there a man living, unencumbered and receiving the munificent salary of even \$25, who will not lay aside, or two years, 25 or 50 cents a month, not for "other peoples use," but for his own protection? Recollect that upon the individual exertions of each member rests the success or failure of an organization like that which we propose. After reading this issue of THE OPERATOR subscribe for it and send it to your circle of acquaintances, with the request that they forward it to theirs. THE OPERATOR's interest and ours are identical. Upon us it rests, and we in turn receive assistance at its hands. Write your views to THE OPERATOR.

NIGHTINGALE.

The Microphone.

A paper lately read before the Royal Society announces the invention by Prof. Hughes, of Kentucky, inventor of the Hughes Printer, of this astonishing instrument or apparatus, which opens to our ears a universe of sounds hitherto inaudible—just as the microscope revealed a world of minute life and structure unknown before. Like Mr. Edison, Prof. Hughes was one day employing the telephone for various acoustic experiments. He wished to investigate the effect of sonorous vibrations upon the electrical behavior of conductors, led to this idea by the way in which selenium is known to become electrically affected by light, and also by the researches of Sir William Thomson upon the electrical conduct of strained wires. The Professor had a stretched wire on his telephonic circuit, and, though he talked and plucked at it, no effect followed until it broke. At that moment the telephone uttered a sort of "shh" which was very curious. He placed the broken ends together under a weight, and obtained again faint sounds, which were improved when the wires were connected by iron nails, or a steel watch chain—the more pieces and more diverse in substance from the conductor seemingly the better. Experimenting still further with his broken circuit, especially in the direction of this whisper from Science about "more pieces," he found metallic powder or fine metal filings wonderfully augment the power of transmitting sounds; while shot in a bright condition, platinum, carbon, and mercury also gave good results, particularly the last. Following up this clue, Prof. Hughes hit upon a plan of suspending finely-divided mercury in a stick of charcoal by heating the latter and plunging it into quicksilver, whereupon the charcoal becomes infiltrated with the mercury in minutest but continuous particles. Inserting a "transmitter" of this sort in his circuit, an absolutely amazing sensitiveness to sound, as well as power of conveying it with the utmost fidelity, was displayed by the apparatus. A touch of the finger on the vibrating plate was conducted to the speaking end in volume of vibration like the rustle of a forest; the stroking of a camel's hair brush on a card was magnified into the sound of a loud whisper; the beating of a pulse, or the tick of a watch was found to pass with perfect clearness through a resistance representing a hundred miles of space; and when a fly happened to walk over the plate, the tramp of its feet was most distinctly caught, like that of some six-legged horse trotting, and it was, moreover, heard to trumpet from its raised proboscis like an elephant in an Indian jungle. Sounds, in fact, totally inaudible before to human ears, were arrested and reported by this simple and accidental expedient of interrupting the electrical circuit with a finely-divided conducting material. There is almost no doubt that the perfected microphone will convey to us that hidden ripple of the sap rising in growing trees and plants, which Humboldt said might be a continuous melody in the auditory organs of earth's smallest creatures. — *London Telegraph.*

The Phones of the Future.

Since the philosophic Franklin first got the lighting "on a string," the ingenuity of man has put the subtle and all-pervading fluid known as electricity to marvelous uses. In opposition to the ordinary methods of education, he first set it to writing, and having developed its faculty to the utmost in that direction, he has at last taught it to speak with most miraculous success. It not only reads its own writing, which is more than some lawyers and stenographers and many customers can do, but it will gather up the stray sounds that are floating in the air and give them concentrated utterance. So it is that the era of phones is succeeding the era of graphs through the connecting link of the phonograph. But it is as yet scarcely begun, and it is impossible to predict the results of its development. Thus far we have the phonograph, that both reads and writes and has some skill in music; the telephone, that transmits sounds over long distances and re-articulates them at the far end of the line; the megaphone, and the microphone, that magnify them by many diameters. What other phones await us it is only for inventive genius to tell, but there can scarcely be a doubt that electricity is destined to give us a complete mastery over all the sounds of nature.

Already we have an inkling of what we may expect. The veracious man of science tells us that, by the aid of the microphone, a brief account of which will be found above, we may hear the prancing of a fly on a metallic disk with all the distinctness of a horse cantering over a bridge. Even the insect's respiration may be clearly heard, like the wheezing of an asthmatic elephant. Soon we can bring appliances to bear to gather up the minutest sounds, magnify them to tremendous volume, and hurl them to any desirable distance. We are assured that we shall be able, not only to listen to the tramp of the tiniest insects, but to hear the growing of the grass, and the ripple of the sap ascending beneath the bark of the tree. The seething of the magic alchemy in the laboratory of the leaves, as they transmute the grossness of earth and air into forms of beauty, and the bravery of the Summer's green shall become as audible as the clatter of a common workshop. Then will the dreaming poet, as he lays him down in the woods or field to feel the thrill of nature's voices, surround himself with batteries, disks, and wires, and bring to his ears the clash and roll, the hum, the ripple, and the clang of a Titanic orchestra. Nor will it be necessary to go to the fields and subject one's self to the depredations of bugs and ants to get all the benefit of the magnified and multitudinous sounds that keep the atmosphere vibrating. They may be gathered from their haunts in field and by brook, amid the gloom of forests and along the sounding shore, and be brought by wire from every direction to some grand hall in the busiest metropolis, and there let loose for the edification of gathered crowds. Perchance instruments may be devised whereby these myriad notes may be commingled and controlled to the utterance of most excellent music. Who knows but even the music of the spheres, the voice of the smallest star that

"in his motion like an angel sings,
Still quivering to the young eyed cherubins,"

may be made perceptible to mortal hearing. The voices of earth and heaven may perchance unite in one tremendous symphony through the agency of the symphone that is yet to be invented.

But there are other possibilities hardly less interesting. Not every sound, whether of nature or of art, is either soothing or exhilarating. The nerves of man are subject to torture as well as exaltation. It is not given to all persons to be gently "Hushed with buzzing night-flies to their slumber," and to some the shrill clarion of the mosquito on his midnight marauding is anything but soothing. Cats that make night hideous with their private wrangles, and cackling poultry that spoil the morning nap, these utter sounds that no one would wish to have magnified. And though there might be a cacophone devised as an instrument of torture, to be used, perhaps, as a means of punishment for the worst class of criminals, as something more terrifying than death itself, yet the virtuous and humane would be more concerned for some apparatus that would utterly destroy and nullify horrid and disturbing sounds. Why cannot ingenuity apply itself to discovering some means for eliminating the sound waves from the air at will, so that the cat on the back fence, with arched back and tail erect, may be "seen and not heard," and the mosquito quench his raging thirst for gore without exasperating the victim with his whining, sniveling outcries. And while the combined telephone and microphone might, in the household, enable one to gather up

most interesting whisperings, and accurately gauge the pulsations of two hearts that beat as one, it would be a peculiarly precious boon to be able to sit in one's office all unconscious of outer sounds. The strident and indirect upbraidings of the mother-in-law, the peevish cry of other people's children, the brawl of beggarly passers-by, the din of hand-organ in the street or piano in the adjacent boarding-house, and all the distracting noises that make life weary and an operator break, might be smothered by a faithful anti-phone of some sort, whose function it should be to take the life out of every intruding sound. But no volume of moderate compass would suffice for the setting forth of all the possible results of the invention of phones and their application to the manipulation of sounds. We can only give the imagination a hint, and let it work in this most fascinating field, and meantime we must await the slow processes of invention before a full realization of the benefits of the latest uses of electricity.

Keibler's Ruse with the Phonograph.

Misder Keibler unt me vas prodder-in-laws. Ve both married vone family at der zame time, so ve vas dwins-in-laws, too. Keibler vas a glock maker, und vone ferry inshenious mans. Keibler ask me vone tay to come mit his shop ofer und see somedings new, vot vas kalled der konograph. "Vot is dot?" I onquiret, "A machine vot vil dalk und sing or vidle sheost so koot like a human mans." Den I told Keibler I should like to vittness so vonderful a dings like dot, und so soon ash I ko mit my howess ofer und seen mine vife, I would come round; but so soon ash I kets mit der toor, mit mine howess, I hears vone beak voices on der eend-side. So I dinks me I blay erdropper a leedle, und der virst vords vet valls down on mine ear vas—"Kadrina, vy you vil leef mit dot loaver fool, mit a huspant? you will make yourself daet vorken unt leefing like dis vay! Vy you don't buy a divorces, und ket sblit abart!" (Dot vas mine modder-of-laws, yaw.) Vaell, I didn't shoth to hear some more, unt I sdeals me quietly mit der pack gate owet, und der farder ash I gone, der more I vash me mat—I vash me mat because I vas fraidt mit mine modder-of-laws, who vas a voomans! Den I vondered should I think abowet dwenty klasses mit Hahn's lager peer of I would pe fraidt mit her. I made my mindt op I vill dry it anyhow. So I goes me ofer mit Hahn's, und der virst mans vat I medet py dot zaloon vas Keibler, "Hailloa," says Keibler, "Vy you didn't come mit my shop ofer?" Den I oxblainet dot droubles mit mine families. "Shoost like I am," says Keibler, "she vas mit my howess py yesterday raising errows mit me und mine vife." I says mit Keibler, "Let's ket Schmellin toorunk, und go preak her all up!" "No," says Keibler, "I got a roose." "Vat is dot?" I askgd. "Vone leedle sdratagems," says Keibler. "Lisden mit me, und I vill tole you. Now dot oldt voomans (our modder-of-laws) vas afraidt mit kosts und sbirts. Vaell she hafe already hat dree huspunts, und dree huspunts vas aready daet." "Vaell vot ouf dot?" I onquiret, "Blaenty of dot," says Keibler, "I got all dem huspunts sbirts in der konograph!" "How you done dot?" I says. "Dalks em all in mit mine moudt," says him, "unt I got em all fine down, unt to-night you vil zeen a zirkus." Den Keibler laeft so hardt ash he fell mit his shair of, rolled mit der vloor ofer, shoood mit his hat on, und kicked himself mit shoy. "Vaell," I says, "Keibler vot you going to done mit der sbirts?" "Dey vas all mit der shelf now in der oldt vooman's glosset, glose py her ped, singing und yelling, und telling der oldt voomans she don't vas long vor dis voruld, ouf she don't poody kervick sdog making droubles mit her son-of-laws, und each huspant makes a awtl varming mit her, und sheaks his name shoost like a kost! I hafe fixed dot machine mit glock vorks, so he runs himself more ash a veek." Den Keibler yoost vebt from so much laefin, unt says, "oh, vat a zirkus, vat a zirkus!" Dat zame nide abowet den o'clock I vas avokened mit some awful voices mit mine vront toor, unt a vooman's voices sgreaming, "Oben der toor kervick! Oh, blease koom, or I shall go daet. Koom kervick, kervick!" So I runs me py der door, und so soon ash I obens it who shall I seen but mine modder-of-laws! Her vace vas so bale like a vite howess, und she vas shooken like she hat der akue! "Vot's der matter?" I onquiret. Und der kost sdorys vot dot oldt voomans dolt me vould fill vone crate, beak, larchge, poodifol pound pook! Den I made my mind oudt Keibler's roose vas a success.

YOSKEF.

BS—Dare vas no more kinder vomen now, ash my modder-in-laws. Of you know some barties ash vants to buy sheep vor cash vone elekant howented howess sent em mit me, or Misder Keibler.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

June 15th, 1878.

A SEVERE thunderstorm visited New England June 12th. The lightning entered the telegraph office of Haverhill, Mass., doing considerable damage.

WHEN the United States Company was merged into the Western Union, in 1866, the Board of Directors of the former company presented President Orton with a complimentary address and five thousand dollars as a testimonial of their appreciation of his energy and executive ability.

BESIDES those published in another part of this paper, we have several other communications on the subject of the proposed telegraphers' protective association, which will be published next issue. Among the rest are articles by Qui Vive and Nil Desperandum. We wish correspondents would forward such favors a little earlier. Those who have not yet voted on the subject, are invited to do so at once.

AT the investigation into the title of President Hayes, June 10, Mr. Elijah L. Bugbee, Washington manager of the A. & P. telegraph office, was called to prove the authenticity of a half rate telegram of over eight hundred words, sent sixteen months ago, suggesting to President Hayes a number of candidates for places in the cabinet. Mr. Bugbee said that the book in which messages were then recorded could not be found, and that it had probably been eaten by rats.

A DISPATCH from Portsmouth, N. H., announces that the Direct United States Cable, which was broken by a Gloucester fishing schooner, was repaired at three o'clock Saturday afternoon, June 1st, by the cable steamer Minia. Dr. Muirhead has just successfully applied his system of duplex telegraphy to this cable between Torbay and Balinskelligs, Ireland. This is the longest line yet duplexed. Several trial tests show an actual speed in working commercial messages of from seventeen to twenty words per minute each way, thereby doubling the capacity of the cable.

READERS of THE OPERATOR should bear in mind that we are always happy to purchase for them anything that they may desire from New York, whether in the line of telegraphic or electrical goods or otherwise. Any telegraphic instrument or apparatus advertised in these columns, or manufactured in this country, will be sent on receipt of very lowest manufacturers' prices. Books, newspapers, or magazines on any subject will be sent prepaid by mail on receipt of publisher's prices. We will thank our readers if in future they will send all their orders, small or great, to us. We will guarantee them satisfaction.

The Right to Use the Quadruplex.

A decision has just been rendered by Judge Sanford in the suit of the Atlantic and Pacific Telegraph Company against the Western Union Telegraph Company, George B. Prescott and others, which involved the question as to which company has the right to Edison's inventions in duplex and quadruplex telegraphy. This important suit was brought to trial in the Superior Court, Special Term, April 19th, 1877, and occupied thirty-six days. Eminent counsel from different parts of the country took part on each side, and among the well-known telegraph men who testified were: Thomas A. Edison (for the plaintiffs), Hon. William Orton, General Eckert, Henry Van Hovenbergh, Frank L. Pope, George B. Prescott, Gerritt Smith, and George D'Infeville.

The case is rather a complicated one, owing to a little weakness Mr. Edison has for making contracts. In April, 1871, Mr. Edison, who was then engaged in perfecting the "Automatic," made a contract with one George Harrington, who, subsequently, with Messrs. Reiff and McManus, of Philadelphia, formed the now defunct Automatic Telegraph Company between New York and Washington, by which it was agreed that all inventions in "automatic telegraphy" made by him (Edison) during the subsequent five years should be owned equally by the contracting parties, Edison and Harrington, and that neither should have the right to sell without the consent of the other. Subsequently, Edison made another contract with Harrington, assigning two-thirds of his own interest in his own inventions in automatic telegraphy to that gentleman, and giving him (Harrington), power of attorney to dispose of the other third. Harrington afterward sold his rights under these contracts to Jay Gould; Jay Gould, in turn, assigns them to one Mills, and Mills conveys them at a later period to the Atlantic and Pacific Telegraph Company. It thus appears that the Atlantic and Pacific Company became owners of all inventions of Mr. Edison in "automatic telegraphy," during the period of five years between 1871 and 1876, as provided in the contracts between Edison and Harrington.

In February, 1873, Edison, who foresaw some of the astonishing improvements in telegraphy which have since been realized, began his experiments in the duplex and quadruplex systems. The Western Union Company made an agreement to provide the requisite facilities to enable him to go on with his experiments. In case of success, that company was to have the exclusive right to the use of the discoveries or inventions. Edison continued at his work until June 1, 1874, when he made an agreement with Mr. Prescott, the electrician of the Western Union, that they should work together at the thing, and to share equally in the amount which the company would pay them in case of success. To this the company acceded. They succeeded in getting out various patents for duplex, quadruplex, and automatic telegraphic instruments, Mr. Prescott, according to agreement, paying the expenses of the same. On December 10, 1874, the Western Union Company paid Edison \$5,000, and on January 16, 1875, the company gave Prescott a similar sum.

When the quadruplex was perfected in 1874, the invention was offered to the Western Union for \$25,000 cash, and \$233 for each circuit on which the quadruplex should be used. Mr. Or-

ton being absent in Chicago, some delay took place, and on the fourth of January, 1875, Edison made a contract with the Atlantic and Pacific Co., assigning his inventions in duplex and quadruplex telegraphy to that company for the sum of \$30,000. About this time Mr. Orton accepted Edison's offer to pay him for the entire property the sum of \$25,000 down, and \$233 for each circuit on which the quadruplex should be used. Edison, in reply, offered to return to Mr. Orton the money already received from him on account, and said he was advised that a previous contract with Harrington would prevent him from assigning the patents to the Western Union. This action was evidently taken in the interest of the Atlantic and Pacific, which company, in addition, claimed a right to all of Edison's inventions in automatic telegraphy for the five years succeeding 1871, the said right being derived by them from one Mills—Mills' right from Jay Gould, Jay Gould's right from George Harrington, and Harrington's right from his contract with Edison, in 1871.

It will thus be seen that Edison made five contracts, viz: One in 1871, assigning half his interest in all inventions in automatic telegraphy to Harrington for the ensuing five years; and a second one, supplementary to this, giving in reality the whole of his interest in said inventions to Harrington. These contracts, which had been considered stale and inoperative after the collapse of the Automatic Telegraph Co., are now held, by purchase, by the A. & P. Co. Contract No. 3 was made in 1873, with the Western Union Co., giving to them the results of his prospective inventions in duplex and quadruplex telegraphy. Contract No. 4 was made in 1874 with Prescott, assigning to him half of his (Edison's) interest in said inventions; and contract No. 5, in 1875, deeded the entire proprietary interest in the same inventions to the Atlantic and Pacific Telegraph Company.

The suit was brought by the A. & P. to establish its right to the duplex and quadruplex inventions which it claimed were included in the 1871 contract. Judge Sanford finds as matter of fact that Harrington only received rights under Edison's patents for electro-chemical and not electro-magnetic telegraphy, the former of which are comparatively valueless. As conclusions of law, Judge Sanford holds that the Western Union Company was a purchaser in good faith, and for value of the inventions of Edison with reference to electro-magnetic telegraphy, without having notice of any claim on the part of Harrington, or any one else; that the company's agreements with Edison and Prescott were valid, and that the company performed its share of the agreement; that Prescott was entitled to one-half share in the proceeds of the inventions by him and Edison as a purchaser in good faith, and that neither Harrington, Gould, nor the Atlantic and Pacific Company has any right in or title to the important inventions which are the subject of the action. He therefore dismissed the complaint June 3d, with costs.

Of course, this decision has nothing to do with the pooling arrangement between the two companies. Pending the decision in Mr. Benedict's suit, no money has been paid by the Western Union to the A. & P. as its share of the joint earnings. The A. & P. has never used the quadruplex.

Electricity in Modern Warfare.

Negotiations for peace, and active preparations for war seem to go hand in hand in Europe. A German newspaper states that Great Britain has ordered of the Siemens Telegraph Works, at Berlin, immediately, two hundred electric lights for the British fleet. These illuminate darkness to a distance of two hundred and fifty yards. The same government is also engaged in laying a cable to facilitate news from Russia in case of war. The Russian government last week purchased from a Mr. Gresham, of this city, the right to use a torpedo invented by him, and also a compound which has proved to their satisfaction to be one of the most effective agents for the destruction of war vessels at sea, or for the blowing up of intrenchments, ever invented. The compound and the torpedo boat are in the main the same—the boat being made of the principal component of the explosive. This ingredient is simply asphaltum, treated by a process which is exclusively the secret of the inventor. The other components of the explosive are sulphuric acid and platina, and the three are made to explode by intense heat generated by the action of electricity upon the platina. Without electricity the compound is said to be non-explosive. For use against an enemy's vessel a torpedo is made in the following manner: Clock work machinery for the propulsion of the boat, a felt cylinder containing sulphuric acid and a piece of platina attached to a wire, and touching the sulphuric acid chamber, are placed between two large tin air chambers which form the stern and bow of the boat. These are put into a bath, and the prepared asphaltum is poured over them, connecting them firmly together. A rudder and a wheel are attached to the stern, and a fork like projection, having three tines, is placed on the bow. At the end of each tine is a small torpedo or grenade, made like the larger torpedo, except that in it is a small battery in which electrical action is produced by concussion. The work of destruction is thus achieved: The torpedo is sent toward the ship or obstruction to be destroyed at a very rapid rate. If the vessel at which it is directed is surrounded by netting, as some of the English ironclads are when at anchor, the smaller torpedoes strike it, explode, and blow it away. The torpedo goes on, and at the moment of striking the ship it is made to explode by electricity conveyed to it by a wire from the battery, manipulated at its starting point. The explosive is estimated to be sixteen times more powerful than ordinary powder, and can be manufactured for about one-fourth of the cost of powder.

Mr. Prescott's New Book.

We have received from Mr. George B. Prescott, a copy of his latest work, "The Speaking Telephone, Talking Phonograph, and other novelties." The book contains 431 quarto pages, 291 of which are devoted to the telephone, including a general history of that wonderful invention; Bell's, Gray's, Edison's and Dolbear's telephonic researches; the improvements of Channing, Blake, and others; the telephone abroad; history of galvanic music; electro-harmonic telegraphy, etc. The remaining four chapters of the book are devoted to the talking phonograph, quadruplex telegraphy, electric call bells, and the electric light respectively.

Although we have not had an opportunity of examining the book anything like thoroughly, we have read enough to see that the subjects are treated ably and exhaustively—as, indeed, was to be expected when we consider the source whence it emanates—and that the "Speaking Telephone"

is a very important acquisition to telegraphic, or telephonic, literature. The text is amply illustrated by many hundred wood-cut engravings of a high order of artistic merit, while the language is such as to come within the scope of the most unscientific reader. The printing, binding, and general typographical appearance of the book reflect credit upon the publishers, and the price being so low, for such a work, as three dollars, will, we are sure, insure for the "Speaking Telephone" an extensive sale both among telegraphers and the general public.

Those who have Mr. Prescott's "Electricity and the Electric Telegraph," should not fail to secure a copy of the "Speaking Telephone," and those who have not, cannot do better than order a copy of each, especially as they are now offered together for \$6. An advertisement of the "Speaking Telephone" will be found in the advertising columns of this issue. Copies of either or both books will be forwarded by Mr. Johnston prepaid by mail on receipt of price.

Answers to Correspondents.

Will you please, as soon as practicable, tell me how I can make permanent magnets, kind of steel used, how should it be worked, how tempered, and anything else appertaining. We may want to know how to make them. There are certain forms we can buy, but for experiments we want them of all sizes and forms. By doing so I have no doubt you would confer a favor on a large number of your readers. Yours, truly,

ARMADA, Mich.

Ans.—Use the quality of steel known as "shear." If you desire to make a plain, cylindrical bar magnet, procure a piece of steel of exactly the size you wish your magnet to be, and face the ends off smooth and true. Then heat it uniformly to a cherry red, and immerse in a saturated solution of common salt (in water). This hardens the metal so that it cannot be filed. Then magnetize by drawing over one pole of a strong electro-magnet a number of times, always in the same direction. If your magnet is to be of a different shape from the above, cut a piece of soft wood to precisely the size and shape required, as a pattern, procure a piece of steel of the above brand, and take them to the nearest blacksmith, who will shape it for you in a few minutes. All attempts to do it yourself will probably fail.

Telegraphers' Rifle Match.

A match between a team of six from the employes of the Western Union and a like number from the Gold and Stock Telegraph Co. took place at the Creedmoor, Jr., Range, 260 Broadway, N. Y., on June 1st, in which the latter were victorious by a total score of 241 to 231. Distance 100 yards. The following were the individual scores. Ten shots each. Highest possible score, 50 points:

Gold and Stock.		Western Union.	
W. H. Collins.....	48	L. E. Lefferts.....	50
D. Bryce Scott.....	45	M. W. Doran.....	39
E. B. Van Keuren.....	40	D. B. Mitchell.....	37
A. A. Knudson.....	37	A. H. Ingles.....	36
R. Forsholm.....	36	T. G. Singleton.....	35
M. B. Medler.....	35	M. T. Wilbar.....	34
	241		231

A return match takes place on Saturday, June 15.

At the regular quarterly meeting of the Western Union Telegraph Company, last Wednesday, the net profits for the quarter ending March 31st, 1878, were shown to be \$791,514.46, or \$79,039.43

in excess of the estimate made at the last quarterly meeting. The net profits for the current quarter are estimated at \$867,018.59. A dividend of one and a half per cent. for the quarter was declared. Mr. Hamilton McK. Twombly was elected Vice President, to fill the vacancy caused by the promotion to the acting Presidency of Dr. Norvin Green.

WE have received a copy of the first number of the *Electrician*, a 16 page weekly telegraphic and electrical journal, published in London. The number before us contains, among other things, an illustrated article on "Hughes' Telephone, Microphone, and Thermopile," another on "Phonophonic Substances and the Magnophone," also "Some Observations upon the Sources of Errors in Practical Telegraphy," the latter a carefully written paper on an important subject, which is beginning to attract attention on both sides of the Atlantic. The paper contains much valuable information for electricians, and deserves a liberal patronage.

Themes for the Thoughtful.

Often the darkest cloud hides the brightest sunset.

To be a man's own fool is bad enough, but the vain man is everybody's.

I have sometimes thought that a passionate man is like a weak spring that cannot stand long locked.

Some of the most cheerful men and women we meet with are the class who have suffered the most trials.

"Life is the torrid day, burned by the 'wind and sun, Death the cool evening, when the weary work is done."

"There is no beautifier of complexion or form, or behavior, like the wish to scatter joy and not pain around us."

When a true genius appears in the world, you will know him by this sign, that the dunces are all in confederacy against him.

Trial and sorrow may develop, unfold, and strengthen character; but trial and sorrow cannot create any divine elements not already in the soul.

Employment, which Galen calls "nature's physician," is so essential to human happiness that indolence is justly considered as the mother of misery.

The children of God are called upon to pass through trials severe and long protracted, but in the end they shall be brought unharmed out of them. They may be cast into the furnace, but to be purified, not destroyed.

Men talk too much about the world. Each one of us here, let the world go as it will, and be victorious or not victorious, has he not a life of his own to lead? One life; a little gleam of time between two eternities; no second chance to us forevermore.

We were born for a higher destiny than that of earth. There is a realm where the stars will be spread out before us like the islands that slumber on the ocean; and where the beautiful beings that here pass before us like visions, will stay in our presence forever.

The Bible is like a large, beautiful tree, which bears sweet fruit for those that are hungry, and affords shelter and shade for pilgrims on their way to the kingdom of heaven. It is like a deep, broad, calm-flowing river, the banks of which are green and flowery. It is like a telescope, which brings distant objects and far-off things of the world very near, so that we can see something of their beauty and importance.

There is coming a time, says Mr. Beecher, when all the dishevelled and separate elements that go to constitute finale perfection shall be gathered up in the future; and I want to be there to see it. O grave, hide not forever! Let me behold the completed thing. I am willing to be a workman in the quarry, and to blast out the rough rocks, and to carve them into forms of beauty, only that I may by and by see the final outcome of that for which I have toiled and sweated and wrought.

Classification of Operators.

In examining back files of the *Telegrapher*, we came across a very sensible article on the above subject, which we reproduce for the benefit of the readers of *THE OPERATOR*, the matter being one in which we are all considerably interested at the present time.

The almost universal dissatisfaction, says the article, which prevails among telegraph operators at their positions and compensation is a great evil, and detrimental to the service in many ways. It is constantly driving from the ranks many of those who are best qualified to elevate the telegraphic profession, and to render professional service which shall prove satisfactory and advantageous to their employers and the public. This depletion has been going on for years, but of late to an extent which demands the serious attention of telegraph managers, and an investigation into the cause or causes which tend to produce a result so greatly to be deplored.

A noticeable fact in this connection, is that it is usually the best and most successful members of the profession who thus abandon it, after devoting years of their lives to acquire proficiency and excellence in it. In other professions and lines of business it is usually the best who remain, and those who have failed, or partially failed, who withdraw. Why this almost universal law does not apply to telegraphy, it is the object of this article to more fully set forth.

In investigating this subject it is necessary, in the first place, to know what are the complaints made by practical telegraphers, and why do so many of them abandon a business to which usually they are much attached. It is a fact that telegraphers generally like the telegraphic business. It has many attractions which cannot be found in any other occupation, and, to an individual of a scientific or philosophical turn of mind, is constantly presenting problems the solution of which is very interesting. To those who do not appreciate its scientific and philosophical aspects it yet presents attractions which would generally retain them in the service were there not other and stronger inducements to neutralize them.

From a long and somewhat intimate acquaintance with the telegraph and telegraphers, it has been found that the most prevalent causes of complaint among the latter are the positions assigned them, the small chance for advancement, and the inadequate compensation, save in the higher positions, in the business. All of these causes might, by proper action on the part of telegraph managers, be readily removed, and with them much of the dissatisfaction and indifference which now, to a considerable extent, demoralize the service. In place of a body of discontented employes might be substituted an ambitious and earnest combination of operators, who, encouraged by certainty of promotion, would labor earnestly and zealously for the best interests of their employers.

To effect this there should be introduced into the operation of telegraph lines a thorough system of classification of operators, and the adjustment of salaries according to position held by individual operators, and to which they have been assigned through merit and ability, and not by favoritism, as is now too frequently the case. Now and heretofore there has been no general system of assignment of either position or compensation; as a consequence, inferior operators occupy positions and receive salaries often superior to those who are better qualified, and who have legitimately acquired a claim to them by years of faithfulness and of zealous study and observation, to acquire the knowledge and skill which are thus shown to be of comparatively little marketable value. The natural result of this experience is that, becoming satisfied that in telegraphy at least skill and experience are at a discount, and that, to find suitable encouragement and reward they must turn their attention and devote their time and labor to other employments, they lose their interest in practical telegraphy, and are soon recorded as having "resigned, to engage in other business." Their services are thus lost, and new operators must constantly be educated to take their places; and, in their turn, if they achieve success, be crowded out of them.

It was one of the purposes of the much abused Telegraphers' League to effect a reform in this as well as other particulars of telegraphic service. The rashness and hasty action which gave its enemies the opportunity they desired to crush it, before it had attained sufficient development and strength to accomplish the purposes of its originators and promoters, was unfortunate, to say the least, and in

the result disastrous alike to telegraph employers and employes. It would be wise on the part of telegraph managers if they would, of themselves, effect this reform at least, as they have it in their power to do, and substitute for the present absurd system—if it may be called a system—some well adjusted and equitable schedule of salaries and promotions.

The idea of instituting some classification of operators is not by any means a new one. It has been attempted in a number of instances, but, for obvious reasons, has never proved practicable beyond a limited extent. The method usually adopted heretofore has been to fix upon four or five different grades or classes of operators, with corresponding salaries, and then arbitrarily assign each individual operator to one or another of these classes, according to his supposed ability and usefulness. In the very nature of things every attempt of this kind has given rise to innumerable complaints of injustice and favoritism. It is a matter of impossibility to draw a line, as for instance, between first class and second class operators, with any degree approaching to definiteness, which will not leave a considerable number of individual operators below the line who think they ought to be above it, and who can produce any number of excellent reasons in support of their position. The amount of dissatisfaction and ill feeling engendered by this system of classification would, doubtless, be so great that it would justly be considered an aggravation of the original disease rather than a remedy.

Suppose, however, that, instead of attempting to classify the individual operators themselves, that the classification should be applied to their positions. In a large office like New York, for instance, let it be understood that certain specified circuits, such as the through wires to Boston, Philadelphia, Washington, Chicago, etc., are first class positions, with a corresponding fixed salary, and that whoever is competent to work them, or, rather, whoever does work them, is entitled to receive the salary attached to the position. Let every position in the office have its fixed salary attached to it in the same way. This classification of positions could be extended without difficulty to every office, large and small, throughout the country. Under this system it would be difficult for an incompetent operator to succeed in getting more pay than he is justly entitled to. An intemperate or careless operator, who would indignantly repel the supposition that he was not a "first class man," would, in many cases, be perfectly willing to admit that he could not work certain "first class circuits" in a manner which would be in all respects satisfactory. An incompetent operator could not obtain a high salary merely by the favoritism of his superior officer, as is now often the case, simply because he would be disqualified to perform the duties of the position to which the salary is an adjunct. On the other hand, the prevalent injustice of keeping an expert operator on a low salary, and yet making him do the work of a higher priced man, and of paying one operator 25 per cent more than another of equal ability in every respect, merely because the latter happens to be a woman, would, by this system, be altogether done away with. It is quite probable that, if this method of adjusting the compensation of operators were once fairly determined upon and properly carried out, much of the present dissatisfaction on this score would be done away with, even though the aggregate sum of money expended in the payment of salaries were not increased. It is an unquestionable fact that, although a large number of operators do not get the compensation they are justly entitled to, there are also no inconsiderable number who are paid more than they are really worth.

Promotions, whenever opportunity occurs, should be made from the employes in the order of merit, and new employes should, and doubtless would, be content to take lower positions, if assured that they were in the line of advancement, and would, in due time, receive such positions and salaries as their proved ability and aptness entitle them to. This would do away with the jealousy which is now so frequently experienced at strangers being at once placed in situations for which their predecessors on the lines believe themselves entitled to the preference.

The phonograph may bottle up the voice and pass it down to future ages; but the smile that twists the face of a man as he seeks solitude and gazes upon his name in print for the first time, will always have to be guessed at. — *Detroit Free Press*.

The U. S. Military Telegraph During the War.

We are pleased to notice an effort on the part of an old military telegraph operator, Mr. William R. Plum, to collect and publish a history of the efficient services rendered by the U. S. M. T. during the late war. Mr. Plum joined the service at the age of 16, in Kentucky, and continued in the U. S. M. T. until the close of the war, occupying at various times the positions of operator at Columbia, Ky., chief operator at the repeating station of Lebanon Junction, Ky., operator in Nashville city office, manager of the military line from Nashville to Paducah via Fort Donelson, operator at Chattanooga, at Gen. Geo. H. Thomas' headquarters before Atlanta, Ga., manager of Atlanta office and of Gen. Thomas' office after the evacuation of Atlanta until the virtual close of the war. He also, by order of Gen. Thomas, accompanied him in the battles of Jonesboro, Ga., and Nashville, Tenn. At the close of the war Mr. Plum went to New Haven, where he was made night manager of the W. U. office during his attendance at the Yale Law College, whence he graduated in 1867. Since then he has been practicing law in Chicago, being a member of the law firm of Page, Plum & Kelsey. Mr. Plum would therefore appear to be just the man to undertake the work of writing such a book, which cannot fail to prove of great interest to the members of the telegraphic profession, and will undoubtedly command a generous sale. But it will do more. It will show the Government and the public how important the telegraph is in war as well as in peace. In a circular to Military Telegraph operators Mr. Plum says:

"It is thirteen years since the close of the war of the rebellion. The part performed by the U. S. Military Telegraph Department was of such vast importance, that the wonder is that our historians have so generally neglected it. Ours was the first great conflict in which the telegraph figured largely. Other nations have since followed our example. If the history of the U. S. M. T. is ever to be written it should be done at once. Already many operators, whose information would be valuable, are in their graves; others are out of the telegraph service, scattered over the country, and not to be found. Memory of dates, names, places, and even of important circumstances fades with the receding years. Memoranda and other documentary evidence are being lost, mislaid or destroyed, and yet the great work of the telegraph department in those trying years remain unrecorded. The U. S. Government has never recognized the services of the operators in any other way than by paying our salaries, just as it paid those of quartermasters' clerks and other civilians. Our officers were of necessity commissioned as aids and quartermasters, without special legislation, and detailed for the telegraph service; their subsequent promotions for meritorious service is practically the only official recognition of the value of the department.

"Having waited patiently for years, vainly hoping that others would write the history of our military operations, I have determined to do it myself. Gen. Stager has kindly placed at my service a large chest of official military papers, which I have carefully examined during the past three months and extensively copied. I have reason to believe that access will be cheerfully accorded me to all military telegraph documents and memoranda in the hands of the late officers of the service. Besides Gen. Stager's cordial aid I am already under obligations to Colonels Lynch (West Va. Dept.), Wilson (Ill., Mo., Ky. and Tenn.), Clowry (Dept. of the Mo.), and Gross (Dept. of the Ohio and the Gulf). To the end that the history, when finished, may be a full and complete presentation of the most important, useful and pleasing facts and incidents connected with the U. S. M. T., I earnestly request you to write me as full a statement as you can of your experience and observations in the service. Please give dates and names as accurately as possible; date of entering and leaving the service, and of locations at the several stations, and positions filled by you; if connected with any headquarters, the name of the General commanding; if you were cipher operator, state that fact, and any special circumstances of interest connected therewith; if you were in any battles, state what, how you came to be in and what you did; all circumstances of special danger and service, including your experience with guerrillas. Did you ever tap any rebel lines; if so, with what result? Ever accompany any army on the march or other military expedition; if so, what special object and service? What experience had you with Myers' Field Telegraph and the Signal Corps? Have you any useful military documents? The above ques-

tions are designed chiefly as suggestions of what is desired. Every operator's experience differed widely from all others, and hence it is impossible to frame general questions that will call out all the facts; wherefore I rely largely on your own ideas of what should be communicated. By thus helping me I shall be able to prepare a book that will contain ample proof of the inestimable value of your services to your country in its time of greatest danger, and which, I trust, may lead to some suitable recognition by the Government of those services."

Mr. Plum's address is No. 208 La Salle Street, Chicago, Ill. Military operators who may not have received a copy of the above circular letter should communicate with him at once, and render him all the aid in their power.

Scientific American Answers to Correspondents.

I have been making some batteries of the following description, costing 8 cents per element. Will you please tell me how many elements I shall need to produce an electric light of 20 candle power? Glass tumbler 5 cents, small flowerpot 2 cents, zinc, etc., 1 cent. A. About 300 of them, if the sulphate of cotton solution is used as an excitant.

On connecting a battery with a pair of Bell telephones they work louder. Would it be detrimental in any way to the telephone to work them with the battery? A. Not if you connect the battery so that its current, in passing through the spool of wire in the telephone, will tend to increase the magnetism of its core, as may be shown by a compass placed near the spool end of the telephone.

1. In Barnes' "History of the United States," at the close of the description of the Atlantic cable, it is said that a message had been sent by a battery made of a percussion cap. Please explain. A. We believe the cap was filled with acidulated water, and in it was suspended a shred of zinc, thus forming a battery, in which the positive pole was the copper gun cap, and the shred of zinc was the negative pole. 2. Is moist earth a better conductor of electricity than water? A. That will depend on the kind of earth.

C. E. L. writes: I notice in the *Scientific American* of April 6, 1878, p. 209, an account of the performance of certain telephone circuits not connected in any way with the wires over which the concert music was being transmitted. There was one incident that the papers had no account of that took place on the wire of Dr. Speare, which is worked with Morse instruments and does not approach nearer than 15 feet to the Western Union wires. He received the whole concert on an ordinary Morse sounder by placing a cylinder of cardboard over one of the coils, upon which he placed an ordinary ferrotype picture. The Doctor says he is frequently able to hear the Morse work from the Western Union in the same manner.

I am endeavoring to construct a telephone, but find many difficulties in the way. The distance over which I wish to use it is, say, 150 yards. I have a single copper wire, a sample of which I enclose. I also have a Leclanché or open circuit battery, and at the opposite end of line I have an electric bell. Now, I wish to use the electric bell for calling attention to the telephone in my factory where there is some noise caused by the working of machinery. 1. Can I work the telephone successfully on this single wire—same wire used by the bell and battery? A. Yes. 2. I enclose a sample of wire wound on my spools on magnets; spools contain 4 oz. each. Is the wire not too fine or light? A. The sample is of about No. 40 gauge copper wire, silk insulation, and is of the right size and quality to give a good result. 3. Is the quantity too small? A. That will depend on the size of the magnetic core on which it is wound. 4. I find difficulty in wrapping wires evenly on spools. Is it important to have it wound very evenly, like thread on spools? A. It is best to have it wound evenly, but necessary. 5. If so, how can I do it? A. By winding the spool in a machine constructed on the principle of the screw cutting lathe. 6. Is the sample of sheet iron (tin type) too heavy for the diaphragms for the telephone? A. The plate is of the right thickness (about 1-100 of an inch), but there is too much lacquer and colodion on it. This you can easily remove by making the plate red hot.

1. What is the best steel for magnets? A. That will depend somewhat on the style of magnet that is to be made. For permanent horseshoe magnets, the German spring steel is generally preferred. 2.

To what degree should it be tempered? A. Leave it hard. 3. Is there a practical treatise on magnetism? A. Consult Miller's "Electricity and Magnetism."

1. If I make a telephone with soft iron core and use a battery, will it infringe on Mr. Bell's patent? A. That will depend on other circumstances. 2. The other day, when it was damp, we worked telephones 70 miles very successfully; since, in clear and dry weather, we could only get indistinct sounds from the same distance and over the same wire. What is the reason? A. It may be owing to loose joints in the main line, which in wet weather become filled with water, so that then the conductivity of the line becomes more uniform throughout its length. Another correspondent subsequently writes, in reference to the last question, that the so-called "extra current" probably prevented the telephones from working as well in dry weather as they did on the damp day, for when the wire is a little damp the extra current escapes to a certain extent from the line. If the questioner is a practical operator he has no doubt noticed that a wire always works better after a light rain. The telephone, being a more sensitive instrument, is affected so much the more by the condition of the line. If a condenser is used in connection with the telephone it will be found to work well at all times.

When an electric current is passed through water decomposition takes place. Is there any liquid which will conduct electricity (with great or little resistance) without decomposition? A. Mercury.

How can I form an earth connection for a telephone where there are no gas or water pipes to attach the wire to? A. Bury a quantity of scrap tin or iron, through which is laid 20 or 30 feet of naked copper wire, of about No. 8 gauge. On this metal heap sprinkle 10 or 12 lbs. of common table salt, and cover the whole with earth, but leave one end of the copper wire projecting above the surface. The metal should be buried in moist earth, at whatever distance that may be below the surface.

The Megaphone.

The latest, as well as the most curious of Mr. Edison's inventions, is the megaphone for which he has but just filled his caveat. It is a sort of sound opera glass. By means of its use persons partially deaf are enabled to hear the faintest sound with distinctness. It concentrates and multiplies the sound in as high a degree as is required. By applying it to the ear at a high rate of adjustment a whisper can be distinctly heard 300 feet away. Mr. Edison has already tested it sufficiently to be satisfied of its entire practicability. It is of a small size, and have attached to it a rubber tube. In the inventor's own words, "It can be taken to a theatre by a person hard of hearing just as a person near sighted now takes his opera glass. All you do is place it on your lap, let the tube touch your ear and all sounds come to you magnified fifty times if necessary. The loudness can be regulated for the ear as you regulate a telescope for the eye." "The invention had a curious origin," added Mr. Edison, smiling. "Strange as it may seem, it came to life through the mistake of a reporter. Some weeks ago a reporter came to see my phonograph and went back and got it all mixed up in his paper. He stated that I had got up a machine to make partially deaf people hear. The item was extensively copied, but I thought nothing more of it until after a while I found myself receiving letters from all over the country asking about it. I answered some, saying it was a mistake, but they kept piling in upon me until I was getting them at the rate of twenty or thirty a day. Then I began thinking about the matter and began experimenting. One day while at work on it, I heard some one loudly singing 'Mary had a Little Lamb.' I looked around; nobody was near me and nobody was singing. Then I discovered that the singer was one of my young men, who, in a distant corner of the room, was softly singing to himself. The instrument had magnified the sound, and I heard it distinctly, although I'm pretty deaf, while others in the room had not heard a whisper. That was the first of the megaphone."

Mr. Edison has now taken out in all 153 patents, and filed 78 caveats.

An apparatus has been constructed for the illumination by electric light of a large carpet mill in Philadelphia. It consists of a Brush dynamo-electric machine of 12,000 candle power, arranged to give four separate currents, each running an electric lamp of 3,000 candle power. This light was recently tested, and it was found to be most brilliant.

Dashes Here and There.

It was the telephone the poet had in his mind, when he spoke of wafting a sigh from Indus to the Pole.

Mr. Edison is thirty-one years old, and boyish in appearance. A distinguished stranger called on him not long ago. "There he is, sir," said an employé, pointing out the inventor. The stranger took a good look at him and said: "No, no. I want to see the old man." Tom roared, and the stranger was so dumfounded that he was hardly able to explain his business.

A singular bequest is that of a Cumberland (Md.) man, who has been an employé of the Baltimore and Ohio Railroad Company for years, and leaves it \$50 in a will he has had prepared, thinking, perhaps, he owed this amount for past favors. Wonder if any of the employes of the Western Union will ever leave the Company anything in their will? Unless they leave it employ some time before they die, we fear they will have very little to leave.

The house of Samuel Hoadley, in Fairfield, Mich., was struck by lightning one day last week, and, although there were seven persons in it at the time, none of them was seriously injured. The house was made almost a wreck. The *Adrian Times* says: "One person says every nail in it was loosened; certain it is that every dish and every light of glass were broken, doors were thrown from their hinges, and scarcely a thing remained intact. The house is being repaired as much as possible."

THE OPERATOR, a journal of scientific and practical telegraphy, published in New York, by W. J. Johnston, a practical operator, is now in the ninth volume, and is one of the best periodicals published—filled with useful and interesting matter, practical as well as humorous. It is published in the interest of telegraph operators, and is richly worth the subscription price. Mr. W. A. Gibson, of the Western Union, will receive subscriptions.—*Lafayette* (Ind.) *Journal*.

According to Mr. W. F. Barrett, the first inventor of the electric telephone was Mr. John Cammack. As early as 1860 Mr. John Cammack, while a student in the Royal School of Medicine, Manchester, made and exhibited a telephone containing not only the intermittent current introduced by Philip Reis, of Hamburg, in 1861, but the principle of continuous current of varying strength used still more recently by Mr. Edison and Prof. Graham Bell. But there is no evidence whatever that Mr. Cammack had carried out his idea practically like Bell.

A manager of a commission office in New England had the following error sheet:

"Providence, checked by you, 113; checked by Providence, 142; deficit, 29."

He corresponded with Providence in vain, his numerous petitions remaining unanswered. He finally concluded that the ways of Providence were mysterious and past finding out, and in the despair of his soul remitted twenty-nine cents, less his commission. The cost to the Company for stamps was thirty cents.

During the Presidential campaign A. G. Horn, a newspaper publisher, at Meridian, Miss., made application for the Associated Press dispatches, but for some reason the Associated Press would not furnish them. Horn then brought suit against the Western Union Telegraph Company for \$10,000 damages, alleging that its officers had influenced the decision of the Associated Press. This charge finally reached a hearing in the United States Court at Jackson, Miss., May 24th, and the case was dismissed at the plaintiff's cost.

ANOTHER USE FOR THE PHONOGRAPH.—When the phonograph shall have become so cheap as to be within the reach of all, which it must inevitably do after a while, the dread of burglars will no longer be one of the terrors of the night. Fill your phonograph—No. 6, intended exclusively for the use of families—with the fierce bark of a dog, and have it so arranged with wires or cords that not a door about the house can be opened, not a shutter loosened nor a window raised, without starting the machine and turning loose the vicariate how-wow-wow bottled within it; and you can retire to your virtuous couch at night "with that serene confidence which the Christian feels in four aces."—*Courier-Journal*.

THE TELEPHONE SUPERCEDED.—Prof. Hughes, the well known inventor of the type-printing apparatus so largely employed on the continent, has made the wonderful discovery that some bodies are sensitive to sound, as selenium is sensitive to light. If such a body is placed in the circuit of a small battery,

it will be so affected by the sonorous vibrations when spoken to, as to replace entirely the transmitter of a Bell telephone. Conversation, music, and all the sounds transmitted by an ordinary telephone are easily reproduced. A mere scratch with the finger-nail, or a touch with the soft part of a feather, is distinctly transmitted. The sonorous vibrations produce strains in the conductor, which cause variations in a current flowing through that conductor. — *Nature*.

Mr. W. J. Johnston, of 11 Frankfort Street, New York, editor and proprietor of *THE OPERATOR*, a paper of large circulation among telegraphers, is also the compiler of "Lightning Flashes," a handsomely gotten up volume of spicy, piquant and humorous sketches, handsomely illustrated. Among the contributors we notice the names of Benson J. Lossing, LL.D., Charles Barnard, of *Scribner's Monthly*, and John Oakum, author of *Oakum Pickings*. Those who may be fortunate in securing "Lightning Flashes" must unhesitatingly pronounce it a genuine treat. The price being so extremely low, \$1.50, places it within the reach of all. — *Greenwich (Conn.) Observer*.

At the fourth regular meeting of the Electrical Society, of the Ohio Valley, at Cincinnati, June 5th, Prof. Clark, of the Cincinnati University, made a brief but exceedingly interesting exposition of the application of electricity to chemical analysis, especially of the metals and ores, which was illustrated by experiment. He was followed by Mr. Chambers, of the "No Ground Connection Lightning Rod" Company, with a paper of some length, sustaining the new and peculiar theory advanced by that company. At the close of the discussion which followed, the meeting adjourned to visit, by invitation of Mayor Gilliland, the Edison phonograph, on exhibition in Greenwood Hall, where an hour was very pleasantly spent with that wonderful arrangement.

PERPETUAL MOTION.—A magnetic clock, invented by Daniel Drawbaugh, of Milltown, Cumberland county, Pa., is sufficiently remarkable to be worth description. The magnetism of the earth, an inexhaustible source of power, is made to oscillate the pendulum, and the simplicity of all the works gives an assurance of the least possible friction. At a certain point the movements of the pendulum itself shut off magnetic connection with the earth, and at another point restore the connection, thus securing the conditions necessary to produce its oscillations. The works are so ingenious and simple that it is no wild assertion to make that, were it not for the unavoidable wearing out caused by even the small amount of friction, the clock would run as long as the solid earth endures. This clock is hung against a board partition, with all its works exposed, subject to the jarrings of machinery and obstructions from dust settling on it, yet since March 1, 1877, it has been running continuously and uniformly, with only slight reported variations, as tested by transit observations at noon.

PROGRESS OF THE PHONOGRAPH.—Those who have become interested in Edison's curious invention of a machine that talks, will be glad to learn that he has doubled its capacity within the last month. The cylinder machine, as first made, dissipated most of the voice of the speaker, so that it returned only a faint and feeble falsetto in response to the loudest speech, and even then it was necessary to apply his mouth directly to the mouthpiece. In March Edison increased the capacity of the phonograph so that it would record his speech at a distance of three feet; by April 20th he had increased its sensitiveness so that he could speak to it at a distance of nine feet and receive an audible and intelligent response; and yesterday he reported to this office that he had talked to the machine and been heard and received a repetition of the speech at a distance of thirteen feet. The increased power is obtained, we understand, not by any radical change in the form of the general materials of the phonograph, but merely by supplying steel bearings, so that the cylinder will run with unvarying uniformity. If this remarkable improvement has been made in a month, it is not too much to hope that the anticipations which experts have considered extravagant may yet come true, and the phonograph be actually used in public meetings and courts to catch and record imperishably all the answers of witnesses and all the eloquence of orators. And it would chronicle all the applause and laughter in the right places—which would be awkward for those congressional declaimers who put in the "applause" and "laughter" themselves. — *New York Graphic*.

A PERSISTENT WOULD-BE TELEGRAPHER.—Here is another letter, received at the railroad office at Reading, Pa., from the same party whose letter we published in *THE OPERATOR* of May 1st:

MANHEIM, April 30, '78.
Dear sir: I would like to learn telegraphing and I wish you would charge to learn me. I suppose you would give me my boarding. Please answer me & let me know what you would charge to learn me & have my boarding free. At the Junction I can learn it for \$30 & have boarding free.

Answer soon & address.
Please tell me at what station to stop off if you will learn me.

Echoes from 197.

One of our new men, Mr. Whallon, makes a copy which is greatly admired. He works on the night force and signs "Wh."

Osgood S. Wiley has obtained a situation on the Metropolitan Railway. He is the most enthusiastic "skirmisher" in the business.

Mr. James H. Lyman has donated to the operating room four handsomely bound volumes of Johnson's Encyclopedia. They are extremely valuable in the matter of reference.

David B. Mitchell has been transferred from the New Orleans wire to the first Chicago quadruplex. This makes the Chicago team consist of Merrill, Brick, W. J. Landy and Mitchell. Their work is superb.

Jules Guthridge is enthusiastic about Kentucky. Writing from Louisville he says: "They have the best whiskey, the fastest horses, and the handsomest women in America."

James E. Stark and F. W. Blanchard are ardent disciples of Ik Walton. After their recent fishing excursion the following lines were found on the Providence desk:

"They moved in tracks of shining white,
And when they reared, the elish light,
Fell off in hoary flakes."

During the past four months experiments have been conducted with the Craig Automatic System in the operating room without determining anything. The apparatus has been transferred to the electricians' dept., room 39. Mr. Foote has general charge. Mr. T. F. Taylor acts as the mechanical, and Mr. George A. Hamilton as the electrical expert. \$150,000 is the modest sum asked from the W. U. Co. for this great (?) invention.

PERSONALS.

Mr. Frank Cummings will return to Lebanon Springs, N. Y., to take charge of the W. U. office, in connection with his duties as hotel clerk.

Mr. Thos J. Stevens has resigned the management of the Bethlehem, Pa., W. U. office, to accept a position with the same Company at Oswego, N. Y., his home.

Mr. E. A. Chantler, of the St. P. and P. R. R., Minneapolis, Minn., and Mr. P. A. Rogers, chief operator N. W. Tel. office, same city, started east on a month's vacation June 1st. We hope they will heartily enjoy the trip. F. P. Reeves will sub for Mr. Chantler, while Morris Towne will officiate for Mr. Rogers.

PEORIA, ILL., CITY OFFICE.—J. E. Ranney, manager; Frank Delano, chief, and little Ben Griffin on quad; Ed. Colton and Bob Gray, way wires; Bub Sedgwick, night man; J. B. Hammett, bookkeeper; C. E. Page, A. & P. manager. There are 17 wires in the office. Branch offices are run by Charlie Wincup, corner Main and Adams Streets, and Larry Eagle at Stock Yards.

A medal was presented, Decoration Day, to Edward J. Donnelly, a messenger in the employ of the American District Telegraph Company, in this city, in recognition of his courage in capturing a thief who attacked him on Broadway on May 23d. The presentation was made in the presence of the entire Third Battalion of the force.

"It is difficult," says the Elmira, N. Y., *Advertiser*, "to imagine how there can be a more faithful and competent operator, anywhere than Mr. Edward W. Barnum, who takes the night dispatches for the *Advertiser*. He is never absent from his post when his health will permit him to work, and his elegant

manuscript is a relief to the night editor, and a luxury to the compositor." Unlike a great many newspaper compliments, this one is well deserved.

M. L. & T. R. R. AND STEAMSHIP LINE.—At Algiers we find P. S. Huder, assisted by G. A. Ellsworth. Harry Harrison, night chief, is universally liked. New Orleans, Wm. Cummings. Ferry Indg, T. Westfield. Texas Depot, R. Hogsett. Boutte, W. C. Mills. R. S. Seery. Desallemands, A. M. Kincade and W. W. Wall, formerly of N. O. & M. R. R. Raceland, J. M. Boehm. Ewings, W. West. Larfouch, W. J. Taylor. Terrebonne, H. A. Kohnki, C. Cleppinger. Chachahoula, Dechaux and T. Fay. Tigerville, L. A. Mills and F. Somerindyke. Bayou Boeuf, J. B. Allen. Morgan City, C. McClellan and F. McCarty. Shell Island, G. Gillooly, the "Hermit."

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One of the Detroit operators has gone off to Berlin, Ontario, on vacation, and thus writes to *THE OPERATOR*: "I love to steal"—now just wait till I get through—"a while away"—away from the noise and the dust of the city, away from the clatter and bang of the uproarious quad, and all the little quads, the eternal din of which I gladly leave behind, to listen here, in this quiet country town, to the songs of the birds, the hum of the bees, and the sweet fragrance of the flowers, which everywhere abound and fill the air with their grateful perfume. In short, I pulled myself away from the bosom of my family, left Detroit a week ago with the determination, having a touch of rheumatism, of taking a rest. And here we are, that is, the boy and I. We have been having a splendid time running around the clover fields, fishing, shooting, swimming and playing la crosse. We return to Detroit in about a week. Though I enjoy my visit here, I am beginning to wish myself home. I am being consumed with ennui, and long to fall into my place again with my telegraphic harness on, for, after all, labor brings us the only true happiness.

MARRIAGES.

BURROWS—SLINGERLAND—May 22d, at Elora, Canada, by the Rev. Mr. Middlemiss, Mr. Alfred Burrows, agent Dominion Tel. Co., Guelph, to Miss M. E. Slingerland, of Stoney Creek.

DALEY—UPSON—May 30, at St. Paul's church, Burlington, by Rev. E. R. Atwill, Thomas M. Daley, of Boston, recently appointed station agent at Revere, Mass., to Emma B. Upson, operator C. V. R. R., of Burlington.

BRIEN—PHIPPS—June 5, at St. Charles Boermeo's church, Brooklyn, N. Y., by the Rev. Dr. Free, Mortimer A. Brien, manager W. U. office 111 Broadway, N. Y., to Bertha K. Phipps.

DEATHS.

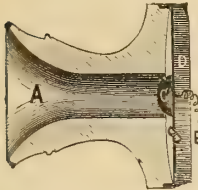
May 9th, of convulsions, after one day's illness, Mary Margaret, daughter of G. Frank Jones, of Phila. Local Tel. Co., aged 2 years and 3 months. The remains were interred in Locust Grove Cemetery, Annapolis, Md.

BIRTHS.

June 4, at Sudbury, Mass., to A. C. Houghton, manager W. U. Tel. Co. and ticket agent, Boston, Clinton, Fitchburg and New Bedford R. R., a daughter.

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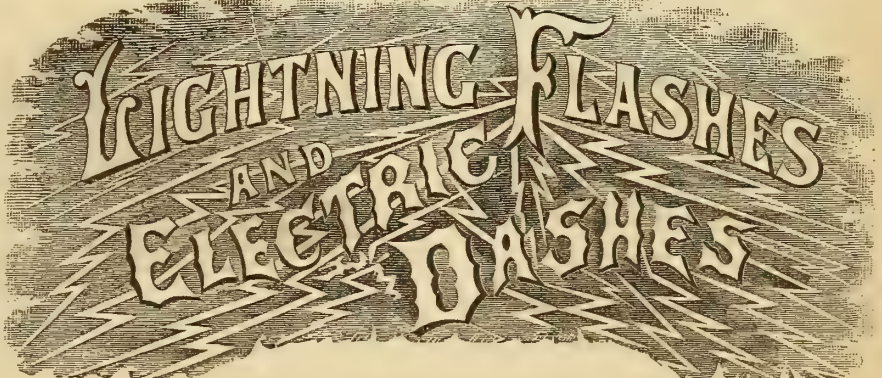
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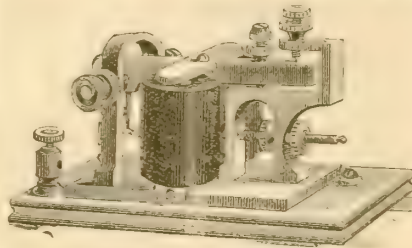
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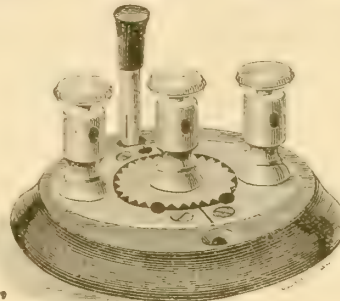


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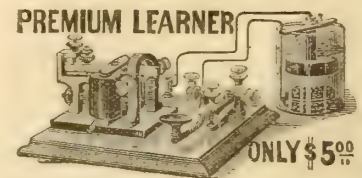
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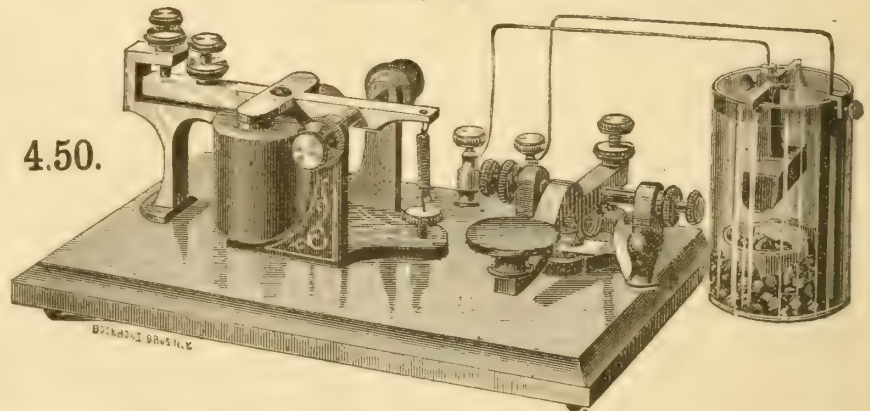
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VOL. IX.

NEW YORK, JULY 1, 1878.

No. 13

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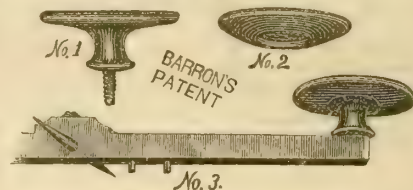
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THE SECRETARY of the Telegraphers' Mutual Benefit Association, in his annual report, says that fourteen out of the sixteen deaths of members during the year were caused by consumption. This fell disease being the result of close confinement, lack of fresh air, and insufficient physical exercise, it surely behooves telegraphers to do what they can toward, as far as possible, counteracting the effect of long hours and close confinement. Everybody requires exercise, and probably telegraphers, bending over a desk for ten or twelve hours a day, stand more in need of it than any other class. We have introduced to the profession the Goodyear Pocket Gymnasium, an invention designed not only for lifting, rowing, and the like, but which also combines all the advantages claimed for the Health Lift, with such as are secured by the ordinary gymnastic exercises. These tubes, besides having a very large sale among telegraphers, have everywhere given eminent satisfaction. They are selling by the thousand among the general public, and are everywhere considered the best apparatus for physical culture in the market. This system of exercise is purely reactionary, the contraction of the elastic material securing the double pull, which is deemed so advantageous. The accurate graduation of the appliances, and their great range of power, adapts them alike to young and old—to the feeble as well as the stalwart. Here, then, is EXERCISE, and all that the name implies, in the most inexpensive and portable form. Here is the best method of accumulating strength and elasticity; of warding off disease; of securing that physical and mental tone which ever accompanies vigorous health.

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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

July 1st, 1878.

Volume IX.

Whole No. 105.

Hope On—Hope Ever.

Be not discouraged, man,
Though times are hard, and markets make you fret,
Though life is but a span,
There's many a "break," and rise in consols yet.

Time ciphers out a change,
Sometime for all—e'en plugs may some day hope
To find a better range,
Where all their talent may have fullest scope.

Thou wouldn't not be a fool,
Then go not in the path that leads that way;
Be not the easy tool,
Of that small voice that says "it does not pay."

'Tis better to be rushed,
And poorly paid, and put thin earnings by,
Than in the end be pushed,
Against the wall with naught left but to die.

I'd rather work a "quad,"
And earn the wage a plug gets for his bread,
Than idling stake the odd,
On chance of better luck—enough is said.

Y. R. DUPLEX.

Millie Morse.

Miss Millie Morse was a railroad telegraph operator. She was not related to the inventor of telegraphy other than by name, and as there is nothing in a name it could as well have been Millie Brown. Millie was tall, straight as an arrow, and graceful as a princess. Her long, heavy hair was raven black, and her eyebrows, if possible, blacker still. Her eyes were large and brown, and glanced at one a kind of melancholy sweetness that at once won the heart. Her cheeks glowed with health, her lips were as tempting as a ripe peach, and her hands and feet small. Such is the picture of Miss Millie Morse when we make her acquaintance. Place her in a pleasant, little office at Muddy Ravine, seat her at the instrument table, and the picture is complete.

Millie was as attentive to business as the tide. She loved it. Alas, that she ever loved else! Her salary was ninety dollars a month. She did her own housekeeping and dressmaking, and still had time to spare. The telegraphic business at Muddy Ravine was not annoying on account of its superabundance. Millie had an organ in her office, a sofa, a rocking chair, books, and a canary bird. Now, one would think that if any mortal could have been perfectly happy that that person should have been Millie Morse. She was happy, just as happy as a young lady could be—and retain her maiden name. Millie was not ashamed of her name. She would not exchange it for gold or jewels, or fame, but she would exchange it for the asking. Was there ever young lady that would not?

Horace Prince was conductor of a freight train. Horace was young, handsome, but not the most intelligent of men; nevertheless, he "sporting" an imperial mustache, which was almost as great a prize to him as intelligence. It is singular, yet true, that a mustache is the most attractive and fascinating feature—to a young lady—that a young man can possess. Millie was in love with Horace Prince's mustache, and Horace was in love with Millie Morse's eyes. That was the beginning. As time sped along, their love for each other grew stronger and stronger, until finally their two hearts beat as one, and—they were engaged. The wedding was to follow Horace's promotion to passenger conductor, which might be in a day, and might not be for a year, just as fortune favored the persons then filling those positions. Millie was happier than ever before. Look at her now before the glass, arranging her toilet. She is expecting Horace. The train of which he is conductor will soon be due. Horace never came. A brakeman did. He

was almost breathless from running, and gasped: "Miss Morse, tell the superintendent that the bridge across Muddy Ravine gave way a moment ago, that our entire train fell to the bottom of the ravine, and that the engineer and conductor are both killed!"

Millie did not swoon, or fall to the floor. She did not even move, but stood gazing at the unwelcome messenger as fixed as a marble statue, and as pale, and apparently as lifeless. The brakeman became frightened, and ran out of the office to call in the agent. But by the time the agent appeared Millie had overcome the shock, and was at her instrument informing the superintendent of the accident. Her grief was too great to find expression only in her countenance.

For a while Millie discarded society altogether, confining her conversation strictly to business affairs. But the excitement and changing scenes of railroad life were fascinating to Millie's young and buoyant nature, and dispelled her sadness quicker than commonplace life would have done.

Richard Pepper was a train baggage master (or smasher). Dick had long envied Horace Prince the favor bestowed upon him by the charming Millie, and if he did not actually rejoice at Horace's decease, he certainly did not grieve over it. As soon after the sad accident as Dick thought expedient, he began to devise ways to attract Millie's attention. Now, Dick prided himself upon his ability to handle a piece of baggage in true baggage smashing style, and whenever he had baggage to deliver at Muddy Ravine he seldom failed to acquit himself as became a true knight of the baggage car. As often as he dared he would carry baggage to Muddy Ravine that should have been left at the station last passed, in order that Millie might hand him a telegram in regard to it, and thus an opportunity be presented to add another link to the chain that he was so desirous should bind them for eternity. Dick was eccentric, and his eccentricity concealed the real motive for his presenting the fair operator at Muddy Ravine, daily, with some pretended relic or other of more or less value, such as a broken lock from an elephant's trunk, or a splinter from a chest that had traveled around the world in eighty days. One day Dick was left by his train at Muddy Ravine. He passed the day pleasantly in Millie's company, but when he returned to railroad headquarters he was placed in the "sweat box" by the superintendent, and failing to give a satisfactory reason for leaving his car to go into the telegraph office at Muddy Ravine, the superintendent said to him: "We have no objection to our employes holding flirtations with, and courting the ladies, but they must not allow such practices to interfere with business. Here is a pass to Muddy Ravine, and leave of absence for ten days."

Dick obeyed instructions. O! what a blissful ten days. Millie thought no more of Horace Prince. Her prince now was a Pepper. The only delay to the happy union was the smallness of Dick's bank account. He resolved to increase it at all hazards, and that speedily. He invested his little all in "wild cat" mining stock. The price of the stock went down, and Dick was called upon for more money. He could not respond. The stock was sold—and so was Dick. He despaired of ever being able to provide a home for his fair affianced, and, in his desperation, did what hundreds have done before, ended his troubles by putting an end to his life. He left a very loving note to Millie, saying that he could not live without her, and not being able to care for her as he wished, and as she deserved, he "checked" himself into another world.

Millie was again heart-broken. She thought, often, to destroy herself, and join Dick. But she didn't. She pined away to a mere shadow. However, time wipes away all tears in young eyes, and heals the wounds in youthful hearts. Millie recovered, and bloomed again as fair as a full blown rose.

While there is life there is hope; and hope springs eternal from the human heart," is a maxim, the germ of which was unconsciously smoldering in Millie's heart, and which was ere long to burst forth into a flame, and dispel the gloom from her features. Novelty possesses a charm that woos and wins the mind and heart unsuspectingly; at all events, such was its effect upon Millie Morse.

Once more the fair, but grief-stricken lady of the key was courted and won. This time by an operator. The courting was performed by the aid of electricity, and the marriage consummated also by the courtesy of the same invisible agency. That was the novelty about it. The minister pronounced the ceremony, and Ben Harris, the groom, repeated it o Millie by telegraph, and she rehearsed it on the

wire also, that there should be no misunderstanding. Benjamin Harris and Millie Morse having been pronounced man and wife, the ceremony was ended, and Ben sprang aboard the train that was in waiting to carry him to Muddy Ravine, where he was welcomed by his newly-made wife. Millie's married life was as happy as if Ben had been her veritable first love, and perhaps he was. They say matches are made in heaven. SAMSON.

The Atlantic Cable.

The attempt to stretch a wire across the Atlantic Ocean was first made in the summer of 1857. On the 26th of June the United States steamers Niagara and Agamemnon started from a point at mid-ocean, each with one-half the coiled cable on board, the Niagara proceeding toward the American coast, the Agamemnon toward Ireland. The wire broke three times, and the enterprise was then given up, to be renewed the following August under a different plan. This time the shore end was made fast at Valentia Bay, and on the 7th the Niagara began paying out, the Agamemnon to commence when she (the Niagara) had exhausted half her cable. After laying three hundred and thirty-five miles the wire broke on the 11th.

Using the same vessels the attempt was again made in 1858. July 29, the ends of the cable were joined in mid-ocean. The two vessels reached their destinations August 6th. This cable worked perfectly for a time, and hope was high in the hearts of those engaged in the costly enterprise. But the electric current grew weak, and finally entirely failed. But these failures could not discourage a man like Cyrus Field. Taking advantage of the lessons taught him by past experience, he adopted a cable which he believed would answer the purpose. It was made so flexible that it could be managed as a small line, and its strength was so great that suspended vertically it would bear over six miles of its own weight in water. Seven wires of copper of the best quality, twisted around each other spirally, formed the conducting medium. Three layers of gutta percha of very superior quality covered this conductor, and formed the core of the cable. Around this was wrapped tarred hemp. The outside covering of all consisted of eighteen strands of the best quality of iron wire. Each of these strands was composed of seven distinct wires, twisted spirally by machinery. A new company was formed, and in the summer of 1866 an attempt was made to stretch this cable, the magnificent ship Great Eastern being this time employed for the purpose. On the 30th of June she departed with two thousand four hundred miles of cable on board, seven hundred and forty-eight miles of this being a part of that used in the last expedition. In four or five days she was joined by the other vessels of the squadron, the Terrible, William Cory, Albany, and Medway at Berehaven. The William Cory bore the shore end to Valentia. She arrived in the harbor on the 7th, and immediately commenced laying it. This shore end weighed over eight tons to the mile. All the fishermen's boats, together with those of the British war-ship Raccoon, which was then guarding that part of the coast, were brought into service, forming a long pontoon bridge, reaching from the shore to the ship, and on which the cable was brought off. The Irish boat owners made themselves very useful. At one o'clock the cable was landed, and its end carried up the cliff to the station. At three o'clock the William Cory telegraphed through it that the work was accomplished, and the end buoyed in water a hundred feet deep.

July 15th the fleet sailed for the purpose of burying the wire beneath the waves of the Atlantic, having first asked earnestly of God to bless their undertaking. After a few slight, and one serious mishap, which occurred on the 18th of July, when the cable became in some way seriously entangled, they reached Heart's Content, the American terminus—a small fishing port but little previous known to that time—on the 27th. The length of the cable paid out was one thousand, eight hundred and four miles. The first European message sent to America told that a treaty of peace had been signed between Austria and Prussia. A good omen. On the completion of his task, Mr. Field immediately sent congratulatory messages to the President of the United States, Secretary of State, and the directors of the Atlantic Telegraph Company. Salutations were sent to the President by the Queen, reading thus: "The Queen congratulates the President on the successful completion of an undertaking which she hopes may serve as an additional bond of union between the United States and England."

The President responded in these words: "The President of the United States acknowledges with profound gratification the receipt of Her Majesty's dispatch, and cordially reciprocates the hope that the cable which now unites the eastern and western hemispheres, may serve to strengthen and perpetuate peace and amity between the Government of England and the Republic of the United States."

Mr. Field's reply to Lord Clarendon, who asked him what he should do if his cable was not a success, shows how great was his energy and zeal. "Charge it to profit and loss," he said, "and go to work to lay another." Truly he is deserving of the honor the world is so willing to accord him. Cyrus W. Field was born in Stockbridge, Mass., in the year 1819. L. A. CHURCHILL.

The Proposed Telegraphers' Association.

"Let us then be up and doing,
With a heart for every fate;
Still achieving, still pursuing,
Learn to labor and to wait."

It is a cause for congratulation to the telegraphic fraternity that the subject of the formation of a society for the prevention of tyranny to operators is being agitated so extensively, and receives so much attention from the fraternity at large. It is a happy evidence that the day when an end will be put to the grinding rapacity of telegraphic employers is not far distant. There can be no division of opinion on the desirability of a combination among the telegraphers of this country. It has been so clearly proven that, unless they take some step for their own protection, they will continue to suffer from the illiberal, narrow-minded policy of the money-getters who employ them, that all must realize the necessity of doing so. There was, once upon a time—"a long, long time ago"—a superstition that faithful and efficient service for a long period of years would be rewarded by the employers so faithfully and efficiently served by advancement in salary, as the business of the employers increased and grew more remunerative. But, alas! this, like many other superstitions of our boyhood, has been exploded as far as telegraphers are concerned; and they are taught, by the policy of the Western Union Telegraph Company, to expect, not a steady increase, but a steady decrease of compensation as the years of their service lengthen. That soulless corporation pushes its employes down the hill instead of elevating them, and feels no hesitancy or compunction in discharging an old, tried, and faithful man, in order to save a few dollars per month by securing a less capable man, who will do the work after a fashion for a smaller salary. Every vacancy that occurs is filled at a lower rate than that previously paid, and the tendency of salaries is steadily downward.

The policy of this giant monopoly is imitated by other corporations who employ telegraph operators. As the salaries of commercial operators are reduced, so are those of railroaders, but generally in even larger proportion. It can readily be seen that the interests of railroad and commercial operators are identical, and also that their only salvation lies in combination. Self-protection is the first law of nature, and the telegraphers of this country must manfully stand up for their rights, and not sit idle and see themselves lowered day by day, without raising a hand to help themselves. If we dare not fight for ourselves, we deserve the degrading serfdom for which the monopolies of this country destine us. By the simple spell of joining hands, the telegraphers of this country can teach these monopolies that they have rights which must and shall be respected. To-day will be a proud one that finds the great mass of the fraternity organized and united. When two-thirds of the operators of all classes are organized into an association for the protection of their interests, they can feel independent, and can be assured of living wages, and not before.

The railroad operators suffer even more than commercial operators from reductions of salaries. A discrimination is frequently made against them, which proves conclusively that their employers consider them so dependent that they will stand any reduction. The engineers, and even brakemen, on railroads are formed into protective societies, and here is one of the results: a principal railroad pays its engineers \$120, its brakemen \$50, and its operators \$36 a month. Here is manual elevated above skilled labor, and a brakeman—a position that an uneducated negro could fill—receives \$14 a month more than a telegraph operator, whom it took six months or a year to perfect himself in his business. What a commentary!

Do the railroad operators of this country need a

stronger argument than the facts given to teach them that their only hope for the future lies in combination, and that, until they do something for their own protection, they will be constantly reminded of their dependence by further reduction of salaries?

One of the fundamental principles of any organization that may be formed should be, war unceasing upon the practice of teaching students in telegraphy. The instruction of students is one of the greatest evils that we have to encounter, and it is a very general one, particularly among operators in the small country towns. It is strange that a poor, underpaid operator, who should have been taught by experience that the wholesale instruction of students in telegraphy is one of the greatest helps to the monopolies in their schemes of plunder, will deliberately teach one or more persons the profession from which he himself hopes to eke out a subsistence. Why a man will, to use a homely but expressive phrase, "cut a stick with which to break his own back," is passing strange. And yet this practice is very general among the class of operators mentioned. The usual excuse given by these men, when remonstrated with for doing so, is, that "My friend is only learning telegraphy for amusement; he never intends to follow it as a business." The teacher does not fully appreciate the fun of the thing, until he is notified that his "amusement"-loving student has offered to take his place for a few dollars less per month than he himself receives.

Some encouragers of home manufacture argue that, unless students are taught by them, the telegraph colleges in the large cities will turn out enough operators to fill all the places, and flood the country with aliens, and that native talent might as well be utilized. How an intelligent, practical operator can believe that college taught "operators" (?) are competent to fill practical positions, except at the plow, is surprising. The frequent thorough exposures of the telegraph college swindles should be sufficient to convince every one—more particularly practical men—that such institutions are a delusion and a snare to catch the unwary. They are usually conducted by blackleg plugs, who have been driven out of all respectable telegraphic employment, and who resort to this means of living by their wits as do gamblers to "three-card monte." Nothing is to be apprehended from this class of students, and if it were not for the wholesale instruction of their "friends" by practical operators with a little spare time, the business would not be so overwhelmingly overcrowded as it is to-day. Let every operator take a solemn vow that he or she, individually, will not teach or assist any student henceforth, and in a very short time events will demonstrate the wisdom of their course. Down with the students!

"Justice moves with leaden heel, but strikes with iron hand." All that we have to do is to work with a will for our protection. Let us organize a telegraphers' mutual protective society, with the object of advancing and securing our interests, founded on well-developed principles, and on a solid financial basis. Something must be done, "an 'twere well 'twere done quickly." I would suggest that wherever there are half a dozen telegraphers stationed, they organize themselves together, and notify the editor of this paper of the fact. Steps can then be taken looking to a general organization. Now is the time to do something. "Protection and equal rights to employer and employe," is our watchword. QUI VIVE.

Your ably written editorial, as well as the views of several correspondents, in the OPERATOR of the 15th inst., on the subject of a "Protective Organization," meet with general favor on this coast, though great surprise is manifested that such organization is not already well under way on the Atlantic slope.

What in the name of humanity have you (the great mass of operators in the east) been doing? Have you been so completely bewitched by the magnanimous (?) monopoly that you are contented with your disgraceful servility, and so docile that you tamely submit to be shackled with the most galling chains of slavery that ever cursed the human race, and not even make an effort to emancipate yourselves? Have you wasted so much precious time in the silly belief that the philanthropic (?) members of the Executive Committee will listen to the promptings of conscience, and ameliorate your down-trodden condition of their own accord? Are you so utterly devoid of all the attributes of manhood that you do not perceive the necessity for resisting the unparalleled encroachments on your rights and liberties? And, lastly, are you willing to place your intelligent services on a par with the hod-carrier at a dollar a day, or even less? If not, for the love of Heaven do something decisive, and

at once. Initiate the good work on a broad and liberal basis. Take in everybody identified with the profession. Hold a convention, if necessary, to discuss the matter thoroughly, and select the best possible means to accomplish the desired result.

There is certainly talent enough among you of the east to organize and maintain a protective association that in a short time can make itself felt and respected. We of the Pacific coast will join hands with you to make the movement successful, but we can do nothing alone owing to our small strength.

It is useless to ask if we have sufficient cause to take the matter in our own hands. It is only necessary to remind you of the systematic reductions, sliding scales, gradings and other nefarious schemes instituted to swell the pockets of capitalists at our expense. Also bear in mind the persistent policy of the Western Union Company, to maintain a complete monopoly of the telegraph business of the country. Every acquisition of a competing line by the monster monopoly has resulted in an advance of tariffs, a reduction of salaries, and last, but not least, an increase of the hours of our labor. Can you wonder that so many of us here are anxious for reform?

Such is our experience on this coast since January 1st, when the Western Union took possession of the Central Pacific division of the Atlantic and Pacific Company's lines. As an illustration of my assertions regarding reduction of salaries and unreasonably severe hours imposed on us since the consolidation, I cite the following as one of a number of equally aggravated cases, developed by most careful inquiry from reliable sources:

Los Angeles, about 500 miles south of here, is, next to this and Sacramento, the most important relaying office in the State. It has eight wires, and takes both day and night report. A manager and two operators constitute the force, but as the former is, from all accounts, a veritable nonentity, the entire work of the operating department devolves on the two operators. They alternate what are called the long and short weeks, the former being from 10 A. M., until midnight and frequently later, and the latter from 8 A. M., until 8 P. M. One of the above-mentioned operators is an old telegrapher from the east, and a married man at that, who came to California in search of health, his constitution having been badly shattered by 12 or 13 years' uninterrupted labor. He entered the employ of the A. & P. in Los Angeles, doing full duty, but having reasonable hours, at one hundred dollars per month; but after the consolidation his salary was reduced to eighty dollars, and the aforesaid hours of duty imposed upon him. Being in feeble health, with a family to support, he has no alternative but to submit to the outrageous demands of the oppressor. These facts can be corroborated by several men in this office who are old acquaintances and personal friends of the operator alluded to.

Ask the Salt Lake and Virginia City operators about reductions, also Sacramento, and then question our having cause for action. Can you wonder that we are anxious and willing to join our eastern brethren in any movement tending toward an improvement? Only set the ball in motion, and open your recruiting offices. We will enlist to a man, excepting, of course, the handful of miserable and generally incompetent managers, whose only salvation is that they cater to the inordinate and morbid appetites of their greedy superiors. Let us join hands at once and assert our rights, but have them at all hazards—"peaceably if we can, forcibly if we must."

"NIL DESPERANDUM."

San Francisco, May 25.

In the last OPERATOR "Distressed Jerseyman," in speaking of students says: "We might make an exception in the case of a brother or sister, and even then the number should be limited." I think so, too. Suppose we succeed in organizing an association and it proves to be a benefit to us (and I have no doubt it will if we all do our part and stand together), who has not a brother or sister or a very intimate friend that they would not like to have in the fraternity? I say let no one take any students without permission from the Association. If any operator can show a good reason for taking a relative or friend in their office and learning them operating (let us leave the word friend out altogether) let them state their reasons to the Association and be governed accordingly. Should any one be allowed to take a student, as soon as the student proves that he is going to make an operator, let him become a member of the Association, if he will. I for one hope such cases will be few and far between.

"Nightingale" gets things in good shape with his article. He has placed the initiation fee plenty low

enough at one dollar, also the monthly dues at fifty cents a month. Suppose it does cost us seven dollars for the first year and six the second. If we hold together during that time and succeed at the end of two years in securing a raise, say of five per cent. on our present salaries, in less than six months we would have money in our pockets, after deducting the thirteen dollars. If we can not get this in two years we can wait three years; but I think there will be no need of that. One thing is certain, our money will not be thrown away, for we ought to be nearly able to keep up expenses on the interest, and who is there in the fraternity that is not willing to loan thirteen dollars (without interest) for the benefit of themselves? If there are any such we would respectively request them not to present their names for membership to the Association. I am willing to make a loan of fifty cents or a dollar a month, if necessary, for two or three years, for I think we will receive back our principal and good interest in the end.

I received a copy of the *Southern Operator* today. The editor says our letters in *THE OPERATOR* indicate "war." We don't want war, we want a Union, and then peace.

Come, boys, send in your names to Mr. Johnston as fast as possible, and let us do something. I think we have talked enough about it, and ought to make a start. The sooner the better. P.P.

From what I have heard among the operators of the Toledo, Peoria and Warsaw Railway I should think they would all only be too willing to join an association that will be a protection to their rights. I doubt if there is a railroad in the United States whose operators are reduced to a lower notch than the T. P. & W. Night operators receive only \$35 a month, which is hardly more than enough to pay their board and wash bill and clothe them. In some instances they have a family dependent upon them for support, and those who cannot have the good fortune to have an office at home, must necessarily be compelled to accept the next best offer. While train men are making from \$60 to \$100 a month, operators are kept at a starving salary. There is not one of us that would not give our share to help support a "Protective Union." During the strike of last July a reduction was made on this road. Night operators who had been paid \$40 were cut to \$35, and day men from \$45 to \$40. Low enough before the reduction, God knows! We were then told that our salaries would be raised as soon as business permitted. But it seems either business or the managers have never "permitted" of a raise. I have never heard an intimation of a desire to "strike," that, doubtless, being far from the wishes of all. I being one of those unfortunate night men, whose services are worth just \$35 to the Company, because they "can get plenty of goon men to work for that," am compelled to submit or starve, and cannot, of course, render the assistance to my widowed mother that I wish. Could not an association, such as "Sentinel" speaks of, fix a salary for all operators—something that will enable them to live, allow us to get out of debt and lay by something for a rainy day? We are all unanimous in our views of a Protective Union. "Tis a consummation devoutly to be wished." DIOGENES.

"THE PRARIE," June 8, 1878.

Having seen the correspondence in *THE OPERATOR* of April 15th, in reference to a Telegraphers' Protective Union, I am heart and hand, soul and body with you. I am one of those unfortunate G. T. R. operators who have to work for a dollar a day—twelve hours. The majority of G. T. R. operators are working for a dollar a day or night, as the case may be. I have sent a copy of *THE OPERATOR* of April 15th from station to station on the line, and asked the boys to pass it on, which they did with pleasure. They are anxious to get organized at once. It is what we have wanted a long time, and now that we have the fire kindled may God send word enough to build a fire which no human hands can put out. I hope it will come to perfection early. I for one will offer my services to do anything in my power in the shape of talking or canvassing for it at the risk of my situation. If we could get a number of good, trustworthy men to travel the country and initiate operators as they go along, and collect a fee from each initiated operator which would pay their expenses and still have some money left to be sent to headquarters, would this not be a good way to organize? Or, have cards with printed obligation on and send to each operator to sign and acknowledge. There are quite a staff of operators here, there being five telegraphic

offices in town and a number close by. We have had several discussions on the subject, and all agree to join heart and hand in the good cause. As soon as you are organized in the States names of G. T. R. operators will pour in thick and fast, and I am almost sure the G. W. R., C. S. R., and in fact all the railroad operators in Canada will tender their support. Please put this badly constructed letter into shape, and give it room to speak for me and the G. T. R. boys. Yours, ever true and thankful,

GEORGETOWN, Ont.

EARNEST.

I am by no means able to pen an article equal to some of the efficient contributions on this subject that are filling your columns. I have very little to say in favor of the organization, as I am but a few years in the business, and have had but little experience. I have suffered one reduction of ten per cent., but consider that we are moving with the times. If our first-class men, who received \$75 to \$100 five years ago, and now only from \$55 to \$80, would consider that everything else has suffered more from "sliding scales" and "gradations" than operators' salaries, they would have no cause for grievance. \$30 will buy more of everything to-day than \$50 did five years ago. Again, if our aristocrats would learn to live within their means, with less deleterious indulgences—rum, beer, cigars, and tobacco—and would take their night's rest instead of attending theatres, balls, and similar places of expensive amusement, or instead of bumming around "down-town," at some groggery, playing cards, billiards, or dominos, they would have less doctor's bills to pay, and be a great deal healthier; they would have no use for "protective organizations," and would have money enough to pay their honest debts, and some remaining to store away against an evil day.

Consider the farmer and laborer, who is perspiring beneath the rays of the sun, when the thermometer stands at 97°, for a mere pittance of 50 to 75 cents a day, carrying the cradle through fields of strong grain, which is our only sustenance, and which enables us to enjoy our ten-cent smoke, and sip our glass of beer—excuse me, I don't indulge in smokes and beer—in the shade at from \$2 to \$2.50 a day. How does that compare with our grievances? Record my vote in the negative. "CUPID."

I do not agree with our friend "Key" (this is not intended for poetry) when he suggests that we should repeat the watch word "no strike," before organizing. I am willing to admit that no organization has ever been benefited by a strike, for the simple reason that no organization of any trade or profession has ever struck but what some kind of substitutes could be found to fill their places. With us, however, I think it would be somewhat different. At the present day there is no trade or profession upon which the community at large are so dependent as they are upon operators. Even now, when operators are supposed to be as numerous as fiddlers are reported to be in—that place that place that Beecher repudiates—I know of instances where business has been delayed for some time at offices where the operator was taken suddenly sick, and no one to immediately fill his place. They could not substitute a laborer, a mechanic or a professional man to take his place temporarily. The noble red man who guards the door of a cigar store would be as useful as the possessor of the brightest intellect and the most extensive education in the land, unless the latter could read the ticks of the sounder. Right here, boys, is where we have a decided advantage, and should every other means fail, I, for one, am in favor of packing our red velvet vests in our old black valises and "stepping down and out." What are they going to do about it? Let us modify your suggestion, Bro. "Key," or rather add an amendatory clause—no strike but as a last resort, and then strike. ALPHA.

KANSAS.

I have read with pleasure the many communications in *THE OPERATOR* on the subject of a "Protective Association." I have waited in vain to hear some one advance an idea that I have been trying to get in shape since the late lamented strike. It will, perhaps, be well for me to state at once that I am a Mason, an Odd Fellow, and a Knight of Pythias. Being a member of these secret organizations, and knowing their benefits and attractions, I am impressed with the idea that an order might be instituted by telegraph operators having all the attractions of other secret societies I have mentioned, and more surely binding them together for their own good. Do not understand me that I am

making war against the Western Union Telegraph Company, or any other corporation needing the services of men skilled in telegraphy. The object I am trying to advance is to form a brotherhood whose highest ambition is the advancement of their profession. Let telegraphers once know their value and they will not be slow to assert it. I would be glad to hear from other members of the fraternity on this idea. We have Knights of Pythias, Knights of Honor, Knights Templar, why not

KNIGHTS OF THE KEY?

I see no reason why we cannot have a protective organization, provided we all pull together. And if it should not benefit us now, it will benefit those who take our place in the future. But I think it will be beneficial to us in more ways than one, and the sooner we organize the better. As the case now stands, the prospects for an operator in the future are decidedly slim, and it may be worse if we do not organize and protect ourselves. And now to all operators, North, East, South and West, one and all, rally and enroll yourselves in the grand movement. There is nothing to lose but everything to win, as self preservation is the first law of the land, and I have no doubt but that we will have the approval of the general public in this stand for our rights and justice. ÆTNA

Individually we can do nothing, but united 'we shall be strong. Record my vote in favor of "A Protective Organization," and allow me at the same time to say that I believe it is our own fault that such an organization is necessary. If operators had not been so eager to make a few dollars by learning every Tom, Dick and Harry that came along with the stamps they would never have been subjected to the "grading system." To retrieve lost ground we must organize, and I feel confident every operator will vote in favor of "A Protective Organization." Yours, truly,

PRINCE EDWARDS ISLANDS.

Telephone Improvements.

M. Maiche states in *Les Mondes* that he has succeeded in suppressing the peculiar metallic quality imparted to the voice transmitted through the telephone, by substituting for the metallic diaphragm a rubber membrane about 0.4 inch in diameter by 0.04 inch in thickness, to the centre of which a disk of tinned iron of the same thickness and about 0.1 inch less in diameter is attached. In face of the magnet the rubber is exposed, over an area a little larger than that of the face, [we infer from M. Maiche's description that this transforms the disk into a ring,] and the membrane is brought to within 0.04 of an inch of the magnet. M. Maiche claims in this way to realize two apparently antagonistic conditions, namely: 1. A thickness of iron sufficient to react on the magnet with sufficient energy, and to develop sufficiently intense induced currents; 2. A vibratory sensibility which allows of the reception of very weak sounds. The voice heard, moreover, is identically similar to that of the speaker talking over a distance of a few yards. There is no alteration in timbre, and all the characteristic qualities are preserved. M. Maiche has also found that long magnets, some 16 inches in length, on which wire was wound over a third of their extent with few coils, are much more sensitive than short magnets. The distance to which sound may be transmitted depends principally on the size and length of the magnet coil and on the section of the conductors. A copper wire 0.4 inch in diameter and 8 inches long, making four or five turns around the magnetized bar, suffices to transmit the sound over a distance of several yards. The membrane of the transmitting instrument M. Maiche considers should be much larger than that of the receiver. The first should be from 3.2 to 4 inches in diameter; the second reaches its maximum sensitiveness at diameters between 1.2 and 1.6 inch. —*Scientific American*.

M. Louis Olivier has lately devised a form of telephone which differs from the ordinary Bell apparatus chiefly in the shape of its diaphragm. This instead of being a merely circular plate, is concave, of unequal thickness and elliptical in shape. Its general plane is also inclined to the axis of the instrument. It is attached by the edges, and a thread of silk is fastened to it at its thickest part. The inventor states that the idea is to imitate the construction of the drum of the human ear more perfectly, and that the timbre of the voice is preserved by the improved diaphragm with great accuracy.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

July 1st, 1878.

WESTERN UNION stock is quoted at \$67, and A. & P. at 26.

We regret to see that the official organ lends its aid to a "Plug Factory" by publishing its advertisement.

MONOPOLIES like the Western Union believe that self protection, on the part of their employes, is the worst law of nature.

We have received several inquiries in reference to the character, standing and reliability of Mr. E. H. Holmes. In reply we would say that the gentleman is rated A1 here, and that implicit confidence can be placed in him.

We notice in the *Official Gazette*, of the Patent Office, that in the week ending April 30th Mr. Edison obtained six several patents, three for speaking telegraphs, one for a speaking telephone, one for a telephone call-signal, and one for a telephone or speaking telegraph. Mr. Edison assigns each of the inventions to the Western Union Telegraph Company.

THE telephone seems to have taken Germany by storm, and is being very rapidly introduced in that country. Sixty-eight telegraph stations are already provided with this instrument, forty-one others will have it in a few weeks, and 111 more before the end of the year; thus there will then be a total of 220 telephone stations in Germany. This is entirely independent of the thousands of telephones in use on private lines.

THE Western Union telling its employes that the late reduction of salaries was for their "real and permanent interests," reminds us of the story of the man who intrusted his two young boys to their elder brother when dying, and enjoined on him to be a father to them. After the funeral the big brother took the two little fellows out, and gave them a sound thrashing, saying: "I hate to do this, but it's for your eternal good."

REPRESENTATIVES of the American District Telegraph Companies of the United States met in convention at the Ashland House in this city, week before last, for the purpose of forming a permanent organization for mutual benefit. Mr. H. W. Pope, of this city, was elected President; C. F. McCulloh, of Baltimore, Vice-President, W. C. Stewart, of Philadelphia, Corresponding Secretary, and N. Hucker, Buffalo, Recording Secretary. During the afternoon the delegates enjoyed a carriage ride by invitation of Mr. L. G. Tillotson. A parade of 200 of the New York company's messenger's took place in the evening, followed by a banquet and serenade to the delegates at the Ashland House.

That Proposed Protective Organization.

Again we devote considerable space in this issue to the subject of a protective organization for telegraphers. A number of correspondents offer their several views in favor of the proposition, while only one solitary individual so far comes forward to oppose it. The latter signs Cupid, but if he is in love with anybody it must be the Western Union Telegraph Company and himself. It is certainly neither with the telegraphic fraternity nor the proposed protective association, although he tells us that he recently experienced a reduction of ten per cent., he seems to be perfectly satisfied with his present salary. This we are pleased to see. It is positively refreshing to find an operator now-a-days who has no complaint to make on that score. We fear, however, that the fact of there being even one operator in the whole country satisfied with his salary, if it comes to the ears of the Western Union Executive Committee, may be deemed ample reason for another reduction. The first was called a sliding scale, the second gradation. Now it would be interesting to know what pet name the next will go by. Who knows but that it may be called an increase? There's not much in a name anyway, and the Executive Committee might just as well call the next reduction an increase, as to call the last one gradation, when it only graded in one direction, and that downward. Besides, they could explain, if questioned, that by increase they meant an increase of net profits and consequent dividends.

It will take a few more reductions yet to bring such obtuse men as Cupid to realize that there is any necessity for telegraphers combining to protect their interests. That reductions will come if there be no organization, is just as certain as that the sun shines. Some operators, and they are generally those at the smaller railroad offices, have a certain awe for, and an implicit confidence in, the Western Union, which no amount of ill-treatment seems able to shake. We think we know more about the inside workings of the company than they do, and we can cordially assure them that if they but examined the matter a little closer, they would find that in this case distance lends a very great deal of enchantment to the view. The Executive Committee and the larger stockholders care as much, or as little, for the welfare of the employes as they do for that of the inhabitants of Central Africa. All they care for is to get them to do the greatest possible amount of work for the least possible remuneration.

The way the company treats its faithful servants is very well illustrated in the case of the manager of a rather important office less than fifty miles from this city. During the strike of 1870, when the operators left the office, he remained at his post day and night, doing the work of several men until the difficulty was finally adjusted. This called forth a highly complimentary letter from the superintendent, thanking the manager for his loyalty and devotion to duty, and assuring him that the company would not fail to suitably reward his faithfulness and fidelity in the hour of need. As the manager's salary was but ninety dollars a month, he of course expected that it would be at once increased to at least a hundred. But it wasn't. Patiently he waited for the suitable reward, and finally it came at the time of the sliding scale, in the shape of a reduction to eighty dollars a month. And, as if that was not enough,

on the occasion of the late de-gradation his salary was further reduced to seventy-five. Thus the Western Union rewards faithfulness and fidelity in the hour of need. This man has grown gray in the company's service, and as he is, moreover, suffering from telegraphers' paralysis, is not in a position at this late date to engage in other business. He is, therefore, compelled to accept whatever the company chooses to give him, and be as content as he can. Of course, hundreds of others have been similarly treated, but this case seems the more heartless on account of the services rendered by the manager when the company most needed them.

Most of the superintendents privately denounce the gradation scheme. One of them in speaking of the matter, said: "We are nearly all opposed to it. We do not think it fair that the men should be further reduced. But what are we to do? Most of us are old men, and have been so long in the business as to be unable to do much else now. If we object to carry out the orders of the Executive Committee and lose our places, what is to become of us?" The telegraphic fraternity will probably soon be in the dilemma of the employes of the Indianapolis railroad, of which it is said that the president recently telegraphed to the superintendent of the line, asking him if he did not think that, as business was so dull, the boys would stand another five or ten per cent. reduction. The latter replied, "When you made the last cut I discharged all the single men, and the married ones were each obliged to drown one child. Should you make another cut I don't know what in the d—l they would do."

Cupid thinks that operators should be more economical than they are, and less given to spending their substance in riotous living. And there he is perfectly right. There is a class of operators whose energies seem to have been directed toward dragging the telegraphic profession down to the lowest possible depths. But then Cupid should remember that, fortunately, all telegraphers are not as he describes. Probably he has been unfortunate enough to meet a rather careless, shiftless, happy-go-lucky set of migratory operators who in reality are a disgrace to the profession. But he must not judge all operators by these. If he comes to New York or any of the larger cities he will find men in the telegraphic ranks who would be an honor to any profession or calling. It is these men whom we want at the head of any organization that may be formed, and it should be the work of that organization to rid the profession of such excrescence as the class of operators Cupid complains of. This can be easily done by all the reputable members joining hands, and setting their faces resolutely against the employment of such in any capacity in telegraphic service.

The letters on this subject in to-day's issue will well repay careful perusal. That all the operators in the country may have an opportunity, if they so desire, of voting in the matter, we send a circular containing the editorial and the letters from correspondents in reference to combination that appeared in THE OPERATOR of June 1st. We said there that wherever five telegraphers in one place were in favor of the association, if they would notify us, steps could then be taken—should it be desired advisable to form such an organization—to have them initiated without unnecessary delay. *Que rive* in this issue suggests the same thing. Readers of THE OPERATOR who have not yet voted, will please do so at once.

Decision in the Pooling Suit.

Elias C. Benedict, the owner of 100 of the 30,000 shares of the Western Union Telegraph Company's stock, brought suit in the Supreme Court to set aside the pooling arrangement between that company and the Atlantic and Pacific Telegraph Company. The details of the case have been fully reported in *THE OPERATOR*. Benedict failed to get an injunction against the companies from Judge Lawrence, and it was almost as well as admitted at the time that his chances of success in his suit were very slight. The case was subsequently brought to a formal trial before Judge Van Brunt at Special Term, and a decision was handed down June 18th, dismissing Benedict's complaint. Judge Van Brunt wrote a long opinion narrating the facts as heretofore shown, and reaches the conclusion that the pooling arrangement was advantageous to both companies. As to the power of the corporations to enter into the contract, which was questioned, Judge Van Brunt is of opinion that under the law as it stands, telegraph companies in this State may legally make almost any kind of a contract among themselves.

The Telephone and the Phonograph in Practical Medicine.

In a communication to the *Lancet*, a writer states his convictions that the telephone, combined with the phonograph, will become a necessity in clinical medicine, inasmuch as we have, in the phonograph, a means not only of registering sounds, but of reproducing them. "However much the telephone may be perfected for clinical purposes, it must always fail in transmitting sounds of the same quality as those received; consequently this defect will necessitate a special education of the ear to interpret the modified sounds. But with the phonograph, sound vibrations can be made visible to the eye, registered on paper like pulse-tracing, and kept for future study and reference." Dr. Stein has recently invented a method of photographing the beats of the pulse. It consists in photographing a beam of light which has been passed through a perforated vibrating disk. The perforated disk is attached to the artery like the sphygmograph. A strong light passing through the hole in the disk, is made to reach a sensitive plate, on which the movements of the disk are recorded in the form of a wavy line. This invention might be made available for registering the sound vibrations of the telephone; for, by attaching a perforated disk at right angles to the receiving telephone drum, the vibrations of the latter could be recorded.

A LARGE carpet manufactory in Philadelphia has recently put in the electric light to illuminate its floors, and the device is a complete success. It consists of a Brush dynamo-electric machine of 12,000 candle power, arranged to give four separate currents, each running an electric lamp of 3,000 candle power. Two of the lamps were placed on the third floor, and two on the fourth floor of the immense building, and when the engine was started up, the machine started at the same time, and without the slightest manual interference the lamps flashed out their light in all its magnificence. The effect was most brilliant. The rooms were flooded with a pure white light like that of the sun, and it streamed out at all the windows, illuminating houses and streets for a long distance in every direction. The light was very uniform and steady, free from the flickering, and considering the enormous illuminating power,

the light was unexpectedly soft and endurable to the eyes. Estimates were made as to the amount that the light furnished by this apparatus would cost if used by the Screw Company as it was used on this occasion, and it was ascertained that the total cost of the whole light from the four lamps, including the items of consumption of carbon in the lamps, interest on the investment, and wear and tear would not exceed thirty cents an hour. The light produced was photometrically equal to 800 gas burners, burning five feet of gas per hour each. This amount of gas would cost \$8 per hour.

IN Cleveland they think they have discovered how to light and extinguish street lamps in the most economical and expeditious manner by electricity. Each lamp post is to be provided with an apparatus which is to be wound up like a clock once in three or four months. The electric apparatus relieves a ratchet wheel of its check, and allows it to make a partial revolution, which throws open the burner, allowing the gas to escape. As soon as this is done, a spark from the battery flashes across the escaping gas, and ignites it. The inventor proposes to have one battery at any point in a large city, connecting by as many circuits as may be convenient or necessary with the street lamps, allowing a hundred or more lamps to a circuit. A slow sweep of a lever around a circular table would suffice to send a charge from the battery over all the circuits, one after another. This charge would turn on the gas instantaneously at all the lamps in the circuit, and they would all be lighted in the same way instantaneously. In less than half a minute every gas lamp in a large city could be lighted by the man in charge at the central station, and they could be extinguished in an equally short time.

PROF. CLERK-MAXWELL, in the Rede lecture delivered at Cambridge, England, recently, thus alludes to the late improvement of the telephone which overcame the principal limitation of its power: "As long as the human voice is the sole motive power of the apparatus, it is manifest that what is heard at one end must be fainter than what is spoken at the other. But if the vibration set up by the voice is used no longer as the source of energy, but merely as the means of modulating the strength of a current produced by a voltaic battery, than there will be the necessary limitation of the intensity of the resulting sound, so that what is whispered to the transmitter may be proclaimed *ore rotunde* by the receiver." This will explain what has been to many so puzzling in the results obtained by the carbon transmitter.

The Emperor of Japan has his palace connected with all the government offices by means of the telephone. An enterprising druggist named Priddy, in Chatham, Ontario, has connected all the doctors' offices in town with his drug store by telephone, and thus he makes things Priddy handy for Chathamites. Vienna journals contain the following advertisement, which shows that telephonic talk is cheap over there: "Telephones, with call signal. One pair of telephones, \$4; twenty-five metres of wire, including call signal, \$3; fifty ditto, ditto, \$5 50. The trade supplied at reduced prices. The quality of the apparatus guaranteed." The Russian Postmaster General has introduced the telephone in his department. Reiss, a German schoolmaster, is said to have made telephone in 1851.

SUBSCRIBER asks: Is the latest invention of Mr. Edison's, the magaphone, in the market yet? If so, to whom can I apply for one, and what will be the cost? If not, is it a possible thing for me to get one, and what course would I have to take?

Mr. Edison is still experimenting with the magaphone, and it will probably be two or three months yet before any will be made, or the invention put upon the market. It cannot yet be stated what the probable cost will be.

Sir Henry Thompson has shown how, by a careful use of the microphone, diseased bone, bullets, or other foreign substances can be detected in the human body.

Themes for the Thoughtful.

Great souls suffer in silence.

No true life is ever a failure.

Temptations are instructions.

Uncharitableness is heartlessness.

Keep the body under, but the spirit up.

Help thyself and the Lord will help thee.

Form plans with care, to execute with vigor.

It is better to have a good conscience and be censured, than to have a bad one, and be flattered.

All noble natures are hopeful. It is a remarkable fact that the purest people are the most charitable.

It will not be those who in this world had an easy time that will be the most honored in heaven, but those who have on them the marks of storm, and tempest, and struggle.

Those days are lost in which we do no good; those worse than lost in which we do evil.

A modest youth may become a confident man, though never an impudent one.

Love those who advise you, but not those who flatter you.

The most agreeable of all companions is a simple, frank man, without any high pretensions to an oppressive greatness; one who loves life, and understands the use of it; obliging alike at all hours; above all, of a golden temper, and steadfast as an anchor. For such a one we gladly exchange the greatest genius, the most brilliant wit, the profoundest thinker.

Coerced innocence is like an imprisoned lark—open the door and it is off forever. The bird that soars through the sky and the groves unrestrained knows how to dodge the hawk and protect itself; but the caged one, the moment it leaves its bars and bolts behind, is pounced upon by the fowler or the vulture.

The faculties wake up and are full of alertness in difficulty. And so when we are lost in the great mazes of life, feeling that the familiar path is gone; when we see no landmarks of duty, no inspiring light of attractive work, and know not where we are—then, if our trust in God does not fail us, we learn lessons we should not otherwise gain.

The prevailing manners of an age depend, more than we are aware of, or are willing to allow, on the conduct of the women; this is one of the principal things on which the great machine of human society turns. Those who allow the influence which female graces have in contributing to polish the manners of men, would do well to reflect how great an influence female morals must have on their conduct.

The grandest operations, both in nature and grace, are the most silent and imperceptible. The shallow brook bubbles in its passage, and is heard by every one; but the coming on of the seasons is silent and unseen. The storm rages and alarms, but its fury is soon exhausted, and its effects are partial and soon remedied; but the dew, though gentle and unheard, is immense in quantity, and the very life of large portions of the earth. And these are pictures of the operations of grace in the church and in the soul.

Put two slices of cucumber into a phonograph and hear whether or not it yells for a doctor.—*New York Herald*.

The Microphone.

Prof. Hughes' remarkable improvement on the telephone has excited, and must continue for a long time to excite the liveliest attention among scientists. No one need be afraid of lawsuits for infringing patents by using Mr. Hughes' "most wonderful discovery of the century" to the utmost, as the inventor declines to patent his discovery. Special skill is not required in applying it. All the capital necessary for the purchase of the apparatus, or rather the material for the apparatus, does not amount to more than fifty cents. With the assistance of illustrations, such as were published in the *London Engineer* of May 11, a boy of ordinary ability can make instruments which produce the most startling results. A mere summary of the account of the manner in which Prof. Hughes accomplished his object, with a brief notice of some of the instruments based on the principle he discovered, is all that will be attempted here. Starting out with the theory that as the electrical condition of substances is affected by heat, and in some cases, at least, by light, and that heat and light being undulatory motions, therefore the electrical condition should be affected by sound, sound being also a production of motion, he resolved to test this. A telephone was made, with a small bar magnet, four inches long, half the coil of an electro-magnet, and a square piece of ferrotypic iron, three inches square, clasped rigidly in front of one pole of the magnet between two pieces of board. He made a battery of three small tumblers having a spiral piece of copper wire at the bottom of each tumbler, and covered with sulphate of copper, and then filled up with clay well moistened with water. Lastly, a piece of zinc as a positive element was placed upon the moist clay. Insulated wires joined the plates, and the three cells were united in a series. This battery will remain in good working order for several months. Connecting the battery with the telephone, at a point in the circuit, he placed a strained wire, but no sound was transmitted until the stretched wire broke, and the transmission was only momentary. Next the broken ends were pressed together with a slight pressure, and the results were better. Then Prof. Hughes was led to find out what substance or combination of substances, which, when affected by sound, would transmit sound to the telephone. A small glass tube filled with "white bronze"—a mixture of tin and zinc to be had in the shops—having the ends closed with pieces of carbon, was connected at the place the stretched wire was used. A galvanometer introduced in circuit gave a deflection in one direction when the carbon was pressed on the white bronze, and when a strain was placed on the glass the deflection was in the opposite direction. This disclosed the fact that the materials to be acted upon must be such that the molecules would answer to the impingement of the sound wave, and thus make an alteration in the resistance of the circuit. He tried all forms of pressure and modes of contact. The best material seems to be metalized charcoal—a piece of willow carbon heated to a white heat and plunged into mercury, so as to be filled with minute metallic particles. This, inserted in the circuit, is termed a transmitter. One has only to speak at it, and the sound is conveyed to the receiver. The diaphragm of the transmitter is dispensed with. If at the place where the stretched wire was used the ends of the wire be each attached to French nails—long, bright nails, with flat heads—and the nails be joined by a coin or any bright metallic substance, speech will be sent to the receiver if one talks to the nails. There is space only to notice one or two of the applications of the discovery. Balance a piece of metalized carbon on a point connected with one pole of the battery through the telephone. Make this piece of carbon rest by a sort of arm on another piece of metalized carbon, and unite the latter to the other pole of the battery. If you speak to it six feet away the sound is heard distinctly at the telephone. A touch of a feather on the wood stand sounds like the sawing of wood. Another wonderful application is as follows: A lozenge-shaped piece of carbon, 1 inch long and $\frac{1}{4}$ inch at its centre, has its lower end pointed and resting in a similar block connected with one pole of the battery through the telephone, and the upper rounded end steadied in a cavity in a like block united to the other pole of the battery. Both the horizontal blocks have the ends to which the wires are not attached inserted in a piece of board. With this transmitter the tick of a watch or the tramp of a house-fly can be sent one hundred miles away. Lastly, if one fill a quill with willow carbon blocks, connect the projecting ends with the poles of the

battery, and insert a galvanometer in the circuit we have an instrument so sensitive to temperature that the galvanometer needle swings violently in one direction on the approach of the human hand. On cooling the tube the needle swings in the other direction. Even the heat generated by the motion of a small French clock can be measured by it.

Mr. Thomas A. Edison writes to the *Scientific American* that the above is a direct piracy on his carbon telephone, and implicates Mr. W. H. Preece, electrician of the London Post Office, as coadjutor of Prof. Hughes.

In the early part of last year, Mr. Edison states, Mr. Preece came to this country, and visited Mr. Edison at his laboratory. With that freedom which is characteristic of the man, Edison exhibited to him the experiments which he had under way, including those involving the carbon telephone. At Preece's express desire Edison made him his agent for the presentation of this telephone in England. Subsequently Preece was also charged with the introduction of the phonograph in that country, and thereafter Edison kept him fully advised of his advances, both by private letter and by mailing him published accounts. Among other journals sent to Preece was a copy of the *Washington Star*, of April 19th last, containing an account of Edison's modification of the carbon for measuring minute degrees of heat; and that this was received by Preece before the presentation of the microphone to the Royal Society is amply proved by the fact that that gentleman embodied an extract from the account in an address delivered in May, before the London Society of Arts. This extreme sensitiveness to heat, it will be remembered, is claimed to be a special discovery of Hughes in relation to the microphone. It is somewhat remarkable besides, in view of the above, that the announcement of Hughes' observation of the capabilities of the microphone as a thermometer appears as an addendum to the *Engineer's* publication of the paper, read by Huxley, announcing the invention of the microphone to the Royal Society, and that our cotemporary stated that the discovery had been made by Hughes since the presentation of the communication by Huxley. Mr. Edison says, in conclusion, that he considers the conduct of Mr. Preece, in this matter, "as not merely a violation of my own rights as an inventor, but as a gross infringement of the confidence obtained under the guise of friendship." Mr. Hughes' part, under this aspect of affairs, is inexplicable, and responses from both him and Mr. Preece, in answer to these charges, will be awaited with interest.

Some Reflections upon the Personal and Future Condition of Telegraph Operators.

It is matter for congratulation that society does not exist in this country under the same conditions as among older nationalities. Because our fathers were lawyers, carpenters or masons, is no reason why we should adopt their occupations. If we are to have telegraph operators, our children need not be. Not that there is anything discreditable in the business, but knowing all its disadvantages, and allowing the imagination to vividly picture the superiority of other pursuits, it is pleasant to reflect that freedom of choice is open to our posterity. True, the rapidly increasing population, and the enormous national, state, county, city and individual indebtedness are doing much to curtail liberty of action. Debt in any form, whether public, corporate or private, is a hard taskmaster. National debt is sometimes a necessity, as when incurred to maintain existence in a righteous cause, from internal or external assault. Private debt may be warranted by sickness, to secure a home, or for a reasonable business venture. The operator who desires to maintain full liberty of action for himself and children, will wisely plan his expenditures within the resources at command, and, if possible, accumulate a reserve fund for future use. The discipline of such a course, the independence which comes with self-restraint, and the knowledge of ability to avail one's self of any favorable opening which may arise, tend to destroy the feeling of slavery to profession, and bring content. Nor is it needful to throw away ambition. There probably is no trade where the prospect for official advancement and remuneration is so small as among operators. Unfortunately there is little premium placed on long continued and efficient service, hence this powerful incentive to constancy is lost. "The survival of the fittest" is, however, an inevitable law, and in spite of official prejudice or stupidity, the most able and faithful will win, on the average, the best condition.

The first thing that an operator should do is to

acquire a firm, regular and rapid style of sending. Having done this, he should ever after watch himself to see that his skill is not lost by neglect or carelessness. Perfect receiving should next be striven for, and this requires education of the ear, training of the hand in penmanship, mastery of rules and forms, skill in adjusting instruments, and much general knowledge of business names, customs, geography, etc. One of the serious difficulties to overcome is the tendency of the mind to act instinctively or mechanically. It is quite possible for an operator to receive message after message, and have no positive knowledge of their contents, even at the time, the brain being full of every variety of extraneous thought. This is a fruitful cause of errors. The thoroughly first-class operator will take intelligent cognizance of the contents of each message. The constant concentration of every faculty upon the work in hand is the only way to achieve the best results in any effort, and this really constitutes the dividing line between ordinary and extraordinary achievements. It is largely a matter of right education, and no ambitious person can afford to neglect rigid practice in this direction. When sending and receiving have been mastered, the attention should be turned to the construction, testing, repairing and maintenance of lines, batteries, instruments and circuits in common use, and subsequently to the more complicated apparatus. There is a strong disposition at the present time to become familiar with the scientific features of electricity, but the field has now become so large, that, unless this is to be made a specialty, it is better to confine one's self to the practical part of the business, which comes into constant use. A general knowledge of the history of the business and state of the art is always desirable. The time will come when it will be necessary to decide whether permanent advancement will be sought for in the commercial, railroad, or scientific branch of the service. This having been determined, no effort should be spared to attain the necessary knowledge and experience. Step by step progress should be pushed so long as the ground passed over is held well at command, but whenever what has already been acquired is in danger of being obliterated, it is better to stop the advance, rather than attempt to explore beyond one's present capacity to retain. It is usually a mistake, after spending several years in the business, to change to other occupations.

The question as to whether telegraphy is congenial or not should be early decided, in order that years of special training and experience may not be thrown away. A decision having been reached, the bridge for retreat should be torn away, and every energy concentrated for triumph in the field selected. Patient, persistent and intelligent industry is certain to secure recognition and success in the end. The benefits arising from common honesty and morality are too apparent to need extended comment. Honesty, however, is something more than rendering a strict account of money and property entrusted to one's charge, and involves a strict discharge of every duty and obligation assumed with fidelity. Such a course can not fail to add a weight to the character that will make itself felt with advantageous result. Fortunately, the day has passed when to be a good operator was a synonym for drunkenness. Nearly all the officials now in executive control, by their example, influence and requirements, are against the old regime, so that intemperance and its concomitant immoralities are at a discount. Even the smaller vices, with all their social charms, are no longer a necessity. It is quite possible for a person with a well stored mind to impart an intellectual relish to his conversation far more attractive than any participation in the indulgence of mere appetite. Fresh information, even upon trivial matters, when not tainted by gossip, a good joke, free from malice, or a witty story, more than compensate for the lack of a friendly smoke, profane utterance, or a smutty yarn. The self-respect which comes from a perfect command in many of these minor particulars is a great source of personal gratification. Recreation is an important subject worthy of consideration. The confining nature of telegraphy is such that, without settled determination and planning on his part, an operator will be entirely shut out from the enjoyments of life. This is a detrimental condition, calculated to develop misanthropy, and will gradually take away the elasticity and vigor of a disposition which is as necessary to success and happiness as any other quality. Entire absence from social relationship develops a one-sided character, which is always attended by many hindrances. Physical health is of vital importance; without it mental activity can not exist in its fullest extent. Every one

is anxious to prolong all his energies, and yet more operators deliberately throw their lives away than in any other profession. The sedentary nature of the business brings about indispotion to exertion. This should be strenuously resisted. Even if the hours for sleep are encroached upon, there should be systematic exercise by walking, horseback riding or athletic sport. If more time was spent in the open air and in developing muscular strength, the number of consumptives among operators would be largely reduced. As a boy was digging in a field, a stranger stopped in the road and asked him what he was doing. The boy said he was hunting a woodchuck. "Are you going to get him?" queried the stranger. "Get him," said the boy, "I've got to get him; the parson is coming and we are out of meat!" The stranger happened to be the parson, but he forgave the quality of the meat on account of the earnestness of the boy. The story is old, but every operator should be equally determined to keep his health, in spite of every obstacle and at the cost of any effort. In connection with telegraphy there seems to develop a certain electric or etheric force not laid down in the books, which stimulates the perception and capabilities. Out of the profession there have passed many men to other occupations who have obtained prominence and influence. The door to progress is still open to those who possess the pluck and determination to avail themselves of it. There must, among other things, be a certain dash and push, with self-confidence based upon merit. Let every one endeavor to extend the sphere of his social and business acquaintance, and to become personally known to his superior officers. When a good thing has been done do not needlessly hide it under a bushel. In the midst of this crowding and jostling generation conscious worth must put away timidity and bashfulness, else it will be crowded out by the aggressive cheek of incompetence. It should never be forgotten that the future standing of the telegraph profession rests upon the individual members, and each should determine to do his or her share to add to the dignity and utility of their chosen occupation.—Geo. H. Bliss in *Railway Enterprise*.

A Suggestion for the Cure of Telegraphers' Paralysis.

EDITOR OF THE OPERATOR:

DEAR SIR—Although I have in my business capacity been the subject of considerable criticism in your columns, I have managed to preserve my equanimity, regarding it as a necessary concomitant of my business, and perfectly natural on your part, although somewhat highly colored. Personally, however, we have no cause for disagreement, and can meet on friendly ground for the common good of the fraternity. In a recent number of THE OPERATOR I find frequent allusions to telegraphers' paralysis, from which I infer that it is becoming quite common. Having long been a sufferer from it, and having succeeded in materially helping myself, I think, perhaps, a statement of my case, and of the treatment I pursued, may prove beneficial to others, who already suffer from or are threatened with the same affliction. I trust you will allow me space in your columns for that purpose.

Eight years ago, while working in Chicago office, I first began to be troubled with this paralysis in sending on the key. It grew upon me rapidly until it forced me to use my left hand. Then I was put on what was called "second New York" wire, where the work was all receiving. After about six months I began to find difficulty in writing. This also increased until at last I could no longer write with my right hand, and was driven to resign my position. The older operators in Chicago will remember my trouble, as will also managers Maynard and Springer. Rest benefited me some, but only negatively, as the paralysis returned when I again went to work. I tried electricity in many different ways without any positive benefit, and at last gave up hope of being cured. About a year ago, however, I began taking phosphorus for an entirely different malady, and, after a few weeks, was surprised to find that the use of my right hand was returning to me. Encouraged by this I kept on taking the phosphorus, and the result you can see in this copy. I believe now that I shall eventually be entirely cured. The preparation I have taken is "Horsford's Acid Phosphate," following the directions on the bottle. I take it a month and then stop a month. I never used intoxicating liquors, but was a moderate smoker. This I have been obliged to leave off. The disease is *not* paralysis. It is entirely a nervous disorder, and only affected me

while I held a pen or a key. Otherwise my hand and arm have always been perfectly sound. Mine was no ordinary case. I could not make a letter on the key or form one with a pen. Judge for yourself what the improvement has been. Being a disease of the nerves anything which affects the nervous system must affect it. Therefore, the use of liquor and tobacco must be abandoned if the sufferer would be cured. Even one cigar daily is very injurious.

In conjunction with the medicine moderate exercise of the hands and arms is necessary. I have derived great benefit from swinging Indian clubs. Care should be taken not to overdo the matter. Light weight clubs are best. Mine only weigh three pounds each, and I can swing them a long time without tiring. I think five pound clubs would be heavy enough for any one. The object is not so much to increase the size of the muscles as to give them gentle exercise to counterbalance the continuous strain brought upon them by long use in one direction. If my experience as related above proves beneficial to any sufferer with "writers' cramp," I shall be very glad to know it, and will at any time be pleased to give any further information in my power. I have never known a case similar to mine, nor have I ever met a physician who understood it and could benefit me.

Yours, respectfully, A. M. VALENTINE,
of Valentine Bros. Western School of Telegraphy.
JANESVILLE, Wis., June 27, 1878.

Letter from the Old Dominion.

It is seldom we find mention of the Old Dominion in the columns of THE OPERATOR. Is it because you never hear from us, or is it lack of interest? I judge that it is the former, and as no one seems to come to the front with a word in reference to us, and thinking perhaps a line or two on the subject might interest a few of your readers, I have ventured to try the experiment myself. I have roamed around the country considerable in my time, and it strikes me that this district is not the least important one in the division, nor is J. W. Kates the least active and influential superintendent. He is a busy man, requiring the minutest details of the whole district to be laid before him for critical analysis, and if they don't get it I miss my calculation. He is ably assisted by Mr. D. Flanery, formerly superintendent at New Orleans, and Messrs. Fisher and Parker make up the clerical force of his office. There are six men, all told, in the operating department of the Richmond office. Everybody knows Jay McGovern, the worthy chief. He has grown gray in the service; was among the early New York operators at 145 Broadway, when the office was on the second floor of that building. But he came to Richmond early, and has spent the past 20 years of his life in this office. He is widely known, for Richmond has been visited by many operators, and among them came some of the best talent in the country. N. C. Pamplin, now manager at Norfolk, Va., Tom Currie, Geo. Eitemiller, Roscoe Sprague (peace to his ashes), and many others of not less notoriety. Mr. McGovern is assisted by Fred. Cudlipp, who, in addition to being a first-class operator, is a very excellent electrician and a thorough gentleman. As a general thing he monopolizes the galvanometer and does the scientific work of the office. The operators consist of George Harrison, Henry S. Rady, Ed. N. Dennis, (formerly of Galveston, Texas), and Robert Morton, late of the A. & P. office here. Last, but by no means least, I beg to mention the name of one, who, by his amiable and generous disposition, quiet and unassuming manner, has gained for himself friends unlimited, R. M. J. Paynter, manager of the Richmond office. In addition to his duties as such he is superintendent of the city fire alarm, a position creditably filled. The last notable addition to the Company in the property line in this vicinity is the buying of the Virginia Telegraph Company's line, which runs through the Shenandoah Valley. This beautiful country is fast recovering from the effects of the war, as the re-established mills, farm houses and barns, fields well cultivated and thrifty will testify; though it was so devastated by Sheridan in his famous raid as to compel the crows that attempted to fly over it at that time to carry their fashions with them. The Virginia Tel. Co.'s line, extending from Alexandria to Staunton, hung heavily on the hands of the original stockholders. It was heavily mortgaged and finally sold. Now, under the management of superintendent Kates, it will soon be made to show its value, and I have no doubt will prove a satisfactory investment.

RICHMOND, Va., June 18, 1878.

Lightning Conductors and Earth Contact.

The importance of a perfect earth contact for lightning conductors is shown by an accident at Nottingham, England, in 1868, which is mentioned by Dr. R. G. Mann, in the *Journal of the Society of Arts*. A copper lightning conductor four tenths of an inch in diameter was attached to the weather-cock, one hundred and fifty feet from the ground upon the spire of a new church, and was carried in an unbroken line to the ground, and probably at first had a good earth contact; but after the accident an investigation showed that some thief had drawn it out of the ground and carried away all that was more than six inches below the surface.

On October 16, 1868, the church was struck by lightning, the fluid passing quietly until within about six feet of the ground. Had there been a good earth contact, all would have gone well; but at this point it was drawn from the conductor to a gas pipe on the inside of the wall, although separated from it by 4½ feet of solid masonry. The lightning then passed along the pipes to the gas mains and off into moist ground; but on its passage it totally destroyed a short piece of pipe near the gas meter and allowed the gas to escape, which, by the way, caused another accident on the following day, when a lighted lamp was carried into the cellar by the person sent to look up the leak. At the point where the electric fluid passed through the wall from the conductor to the gas pipe, the stone work was splintered into fragments through an area of about a square yard on either face of the wall, while the center of the wall, for a thickness of about a foot, was entirely uninjured.

Using the Wire.

The International Telegraphic Bureau at Berne, Switzerland, publishes statistics of telegraph communication of which the following is the substance:

For Europe, India, and the United States together, the average number of telegrams sent was 163 per 1,000 inhabitants, with 36 metres (40 feet) of wire per square kilometre. The Swiss make most use of the wire, sending 1,094 telegrams per 1,000 inhabitants. After Switzerland ranks Great Britain, with 690 telegrams per 1,000 inhabitants, but with a much greater intensity of wire. In Switzerland there were 385 metres of wire per square kilometre, while in England there were 580 metres to the same area. Third on the list ranks Holland, with 610 telegrams per 1,000 inhabitants, and 384 metres of wire per square kilometre. The United States, Belgium, and Denmark follow with about 540 telegrams per 1,000 inhabitants; Norway and Wurtemberg with 408 and 417 per 1,000 inhabitants; Bavaria with 378; Germany and France with 297 and 296; Sweden with 253; Austria with 229; Italy with 202; Hungary with 173; Roumania with 169; Portugal with 136; Spain with 93; and lastly, Russia with 48. Belgium has the largest proportion of wire per square kilometre, where it amounts to 782 metres. England, as above mentioned, has 580 metres per square kilometre; Germany, 321 metres; France, 275; Holland, 384; and Italy, 266 metres.

Echoes from 197.

Jake Tallman is subbing at 197 Broadway.

Jerry Borst has been transferred from the night to the day force.

Mr. James E. Stark is rusticated in Connecticut on a month's leave of absence.

Gilly Olmstead having joined the church, has been transferred to the regular day force.

Miles O'Reilly has resigned his situation with the W. U. Co. He goes to Virginia City, Nevada, to teach school.

If any operator is suffering from *ennui*, let him go on a Sunday excursion. It equals a trip through Bulgaria with a detachment of Bashi-Bazouks.

Ex-Chief Lawson is enthusiastic over the success of the Workingmen and Communists in the late California election. Look out for the engine when the bell rings.

It seems phon-e that the names of all Mr. Edison's inventions end in "phone." But that is better than if they ended in smoke, or, like the Keely motor, in talk.

Dashes Here and There.

The girls call telegraph operators electric sparks. But they always receive them without being shocked.

Edison threatens to leave Menlo Park for some sequestered spot where curiosity hunters and lunatics are unknown.

The woman who thrilled an audience with a bright and electric smile, has been engaged to light the auditorium of a theatre.

By Wire.—Mrs. Malaprop says wonders will never cease. She hears that there has been a letter in the paper about sending money "by telegram," so she supposes the next thing will be that people will send the clothes to the wash, and the dinner to the bake-house, and the children to school, by the eccentric telegraph.

A STRANGE STROKE.—Capt. Gillilan, R. A., who was killed by lightning at the Cape, while wearing a helmet, it has been ascertained attracted the fluid by the metal on his head-dress. When his body was picked up, it was found that the helmet was in four pieces, cut as though with a knife, but the fluid entered the body at the region of the heart.

Mr. Edison intends to employ his telephone for distinguishing sounds within the thorax and other cavities of the body, in place of the stethoscope. It will be of great advantage in medical schools, as a single telephone will be applied to the subject, and as many receiving-instruments as may be required will be placed in communication with it for the use of students.

A novel application of the electric light is proposed by Mr. Edison. His plan is to make a diminutive light apparatus, and inclose it in a glass globe of such size as to be easily swallowed. He will connect it with a suitable battery, and he expects to be able to witness the process of digestion, and to see with more or less distinctness the operations of the internal organs.

A burglar alarm mat has been invented, and application is to be made for a patent. It is an ordinary door mat in appearance, but the instant it is stepped on, it will ring a bell, fire a gun, or anything else that electricity can do. It can be concealed under a carpet or elsewhere, but it will always be on hand when it finds itself under foot. That's what's the mat-er with the mat.

The great wonder of Prof. Hughes' marvelous microphone is its extraordinary simplicity. *Engi-neering*, the London publication, says: "A few nails, a few sticks of charcoal, a tube containing powder, a little sealing wax, a few pieces of wood, and any boy can, in a few minutes, construct a transmitting telephone surpassing in sensitiveness the beautiful instrument of Prof. Bell."

Sound in air moves at the rate of 1,100 feet a second; sound in water moves at the rate of 4,000 feet a second; light in ether moves at the rate of 190,000 miles a second, and electricity in free wires moves probably at the same rate. The nerves transmit their messages at the rate of only 70 feet a second, progress which in these times might well be regarded as intolerably slow.

The account of receipts and payments by the English Postmaster-General in respect of the Post Office telegraphs for the financial year ending March 31, shows that the payments amounted to £257,743, of which sum the receipts fell short to the extent of £2,492. During the year eighteen of the officers of the late telegraph companies have commuted their pensions, and £18,413 has been paid to them.

Mr. Nunn calls the attention of electricians to the use of antimony as a negative element to replace carbon in some galvanic batteries where sulphuric acid is used as the exciting fluid. He mentions among its advantages its cheapness, the absence of scaling and disintegration, and the fact that galvanization begins almost immediately on immersion. He overcame the brittleness of the proposed substitute by casting it on a core of copper.

The Allentown (Penn.) *Register* contains this statement: "Daniel Dlabawagh, of Morrisburg, is the inventor of a magnetic clock. It has neither weights nor springs, but is moved by magnetism from the earth, transmitted by copper and plates, to which are attached wires connecting with the magnet, acting on the principle of attraction and repulsion. This magnet is constantly charged, and the clock kept in constant motion, having been running between five and six years. The works operate the reverse of other clocks; the pendulum in this case

being moved by the magnetism, which in turn moves the works. The clock is seven feet high, and the pendulum weighs 25 pounds.

M. Trouvé, the well-known French scientist, has recently invented a telephone on a new principle, which is made as follows: A metallic vibrating membrane constitutes one of the poles of a high tension battery. The other pole is adjusted before the plate by a micrometer screw, which allows of varying its distance from the membrane without the two ever coming in contact. This distance, however, should never exceed that which the battery current can pass over. If by sonorous waves the transmitting membrane is caused to vibrate, during the vibrating movement the distance between the poles, and hence the intensity of the current, will be constantly modified. These modifications determine, in the receiving apparatus, variations of magnetism corresponding to variations of intensity of the transmitting current, which cause the vibration of the receiving membrane. It will be observed that this new telephonic system is based on the resistance of the exterior current of a high tension battery, and this it would seem possible to modify within very wide limits by placing the membrane in different media, such as rarefied air or other gases, to which vapors capable of modifying the resistance might be added.

THE PARIS EXHIBITION.—There is a very good display of telegraphic apparatus in the French Section of the Exhibition, according to the London *Telegraphic Journal*, but in the English, American, and other foreign sections there is very little apparatus to be seen. Messrs. Siemens Bros., the British Telegraph Company, and the Telegraph Construction and Maintenance Company, exhibit a variety of the ordinary well-known telegraphic apparatus in use in England; Professor Bell exhibits his telephones, Mr. Jamieson his grapnel, and Mr. Sanderson some specimens of his lightning rods. Nothing is yet shown from America. In the French section the number of specimens of submarine cables shown is rather surprising to English electricians, who are too apt to consider that nearly all the work of this kind is done in England. The principal exhibits are the Meyer multiplex apparatus, the Baudot apparatus, which is an application of the Meyer system of distributing the currents to the Hughes printer. There is a duplex Hughes also, which is employed in conjunction with Stearn's combination of resistance coils and condensers. There is a great variety of Morse instruments, French single needle instruments, and electric bells. The French Telegraph Administration exhibit specimen poles, construction tools, maps and models of the French lines, and the apparatus in use.

An electro-metograph is Mr. Edison's latest invention. It is claimed that this instrument would have given a perfect system of telegraphy were magnetism never discovered. In experiments Mr. Edison learned that certain chemical salts lost their friction when subjected to electrical currents. A strip of paper moistened in a common chemical solution is laid upon a metal plate connected with one pole of a battery. A flat platinum strip fastened to the other pole is pressed down upon the moistened paper by the thumb. The thumb can draw the platinum over the paper as though it were greased, until the electric current is interrupted. Then the normal friction of the paper is restored, and the hand will be involuntarily stopped. The elements of this discovery are applied to Mr. Edison's musical telephone. In that instrument the paper is carried over the surface of a drum touched by a steel spring with a platinum face. A sounding board is stood upon edge, with a brass arm reaching to the center of the drum. When the drum is turned the chemical paper is drawn under the platinum spring, and the sounding board drawn outward by the friction. The electric current passes through the paper, destroying the friction, and the sounding-board drops back to its first position. The cessation of the current again causes friction, and the board is again drawn out. This mechanical, chemical and electric action is so instantaneous that the finest and highest notes of the female voice are reproduced 200 miles away.

Among the graduates from the Columbia Law University of this city recently was Mr. George W. Kern, a Washington operator. Mr. Kern has many friends in the capital city who wish him every success in his new profession.

MO. P. RAILWAY, WESTERN DIVISION.—Al Pennington is on a leave of absence for a month. Our dispatchers at "Da" Sedalia are Messrs. Gould and Brock, worthy men and much thought of by all the boys. E. N. Johnson at Dresden does the repeating between "Go," St. Louis and "Hi," Atchison. Mr. Wade, agent at Lamonte, has just returned from a short vacation, much improved in health. At Warrensburg we have E. T. Pennington days, and Jimmie Middleton nights. Holden, Wm. Miller, the old-timer, still holds out. Pleasant Hill, Miss Judkinson days, and little Dennie Sullivan nights. Lee's Summit, Mr. Dine, agent and operator. Independence, Mr. J. E. Walters, agent and operator. Union Depot, Kansas City, Sam Bigger, who handles ten strings with grace. State Line, W. Y. Carlton days, and Clark nights. Leavenworth, Mugford days, and Shaffer nights. Pomeroy, M. Consedine days, and Atchison, Mr. Kearns days. Miss Briggs does night duty at "Br" Knobnoster.

U. P. R. R., WESTERN DIVISION.—F. Z. Fuller, Agent Granger, is visiting Ann Arbor, Mich., on business relating to his anatomy as well as pleasure. R. Phillips officiates during his absence. J. C. Sullivan, agent at Wahsatch, has been east on a brief visit. John Hunter is night man at same place, taking the place of Mr. Dramer, discharged. W. C. Wheeler, agent at Echo, has gone east on a pleasure trip, to extend some time. Mr. Miller runs the machine during his absence. Mr. Steele is night man vice Mr. Crompton, who has lately taken unto himself a wife, and been promoted to agent at Coalville, on S. V. R. R., a branch road connecting with the U. P. at Echo, and operated by this road. A. C. Lathrop, agent at Bryan, has just returned from an extended southern trip. M. C. Mettler has returned to his old position at Piedmont.

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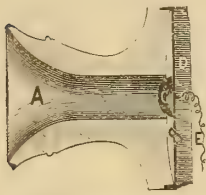
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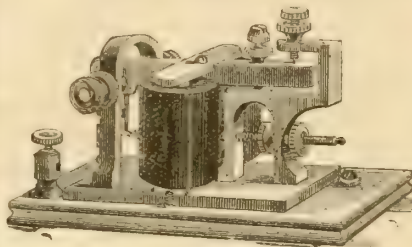
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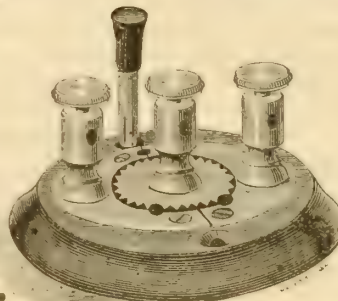


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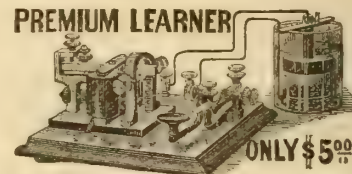
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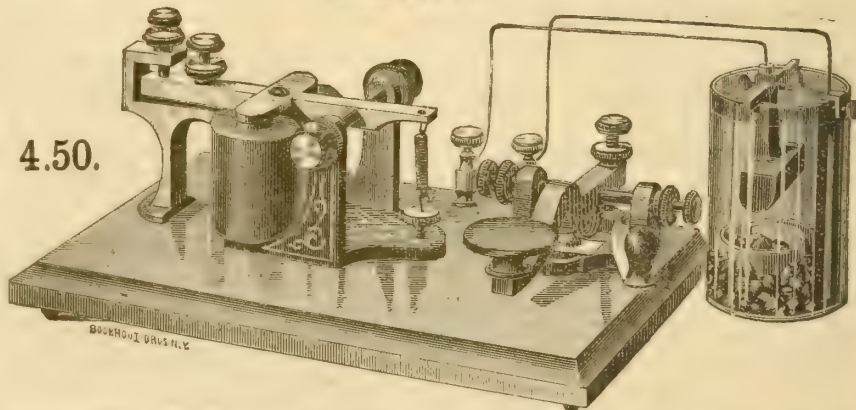
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A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

VOL. IX.

NEW YORK, JULY 15, 1878.

No. 14

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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

July 15th, 1878.

Volume IX.

Whole No. 106.

The Operator's Soliloquy.

While one day for relief I was waiting,
I noticed a weary-faced elf
Who was on his misfortune debating,
And thus he communed to himself:

"I'm a wafter of merit and standing,
My abilities envied by all,
On the wire I've a manner commanding—
'Plumes' tremble with fear when I call.

"I've wandered from ocean to ocean,
Filled from way wire to quadruplex chair;
No position too high for my notion,
No circuit too heavy to bear.

"I have never encouraged a student;
To oppose them I never will tire.
All sound minds know it's highly imprudent,
Only sinking us deeper in mire.

"To the Company I've ever devoted
My attainments. In none known to fail.
But my services never were noted,
Except the dread 'sliding scale.'

"I'm now fit for no other vocation,
And my winter of life's drawing near,
But I work for a paltry donation
Of five hundred dollars a year.

"Yet, what do my talents avail me?
I've squandered my halcyon days,
And now, as adverses assail me,
I'm lamenting the drift of my ways."

My relief now appeared, and I parted
Very loth from my sorrowing friend,
But bethought me as homeward I started,
He'll receive his reward in the end. Col.

Edison's Telephonic Researches.*

About the middle of July, 1875, Mr. Edison, having been furnished by the late President Orton with a translated description from a foreign journal of Reiss' telephone, began a series of experiments with a view of producing an articulating telephone.

In his first system of acoustic transmission, which was devised in September, 1875, and is shown in fig. 1, two tuning forks, A and B, vibrating from 100 to 500 times per second, were kept in continuous motion by a local magnet and battery, and the short circuiting was controlled by the signalling keys, K₁ and K₂. As will be seen on reference to the engraving, this system is dependent upon the varying

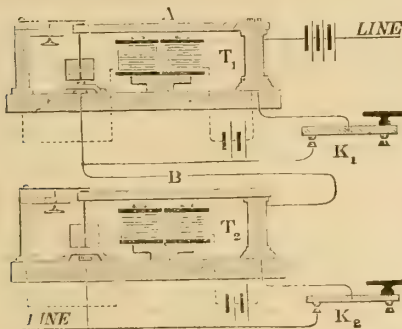


Fig. 1.

resistance occasioned by employing a movable electrode in water, and which thus produces corresponding variations of the battery current in the line.

The receivers, R₁ and R₂, fig. 2, were formed of

telescopic tubes of metal, by lengthening or shortening of which the column of air in either could be adjusted to vibrate in unison with the proper tone of the fork, whose signals were to be received by each particular instrument. An iron diaphragm was soldered to one end of these tubes, and the latter placed in such a manner as to bring the dia-

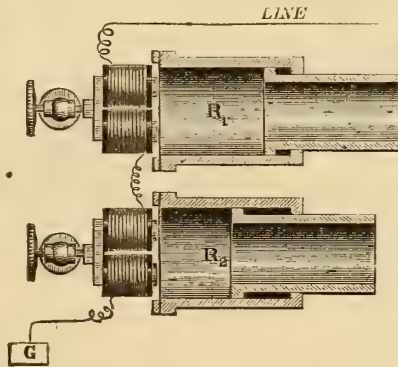


Fig. 2.

phragm of each respectively just in front of an electro-magnet, which, in action, would cause them to vibrate. When the column of air in either receiver was properly adjusted to a given tone, the signals due to stopping and starting the vibrations by the distant key were very loud, as compared to other tones not in harmony with the column of air. Flexible rubber tubes, with ear pieces, were connected to the receivers, so that, in using the instruments, the head of the operator was not required to be held in an unnatural or strained position.

This system worked very well, but one defect in it was apparent from the first, and that was its continual tendency to give the operator what is termed the back stroke, which renders signals unintelligible.

While engaged in experimenting with his telephone, Mr. Edison discovered that the sound waves could be transformed into electrical pulsations without the movement of any intervening mechanism.

The manner in which this result was reached is described by Mr. Edison as follows: "I first substi-

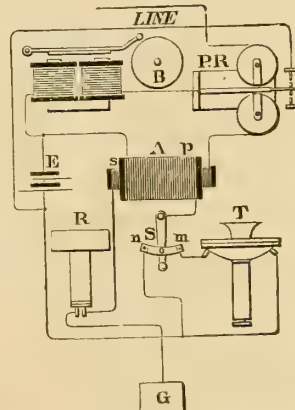


Fig. 3.

tuted a spiral spring of about a quarter inch in length, containing four turns of wire, for the rubber tube which connected the diaphragm with the disks. I found, however, that this spring gave out a musical tone, which interfered somewhat with the effects produced by the voice; but, in the hope of overcoming the defect, I kept on substituting spiral springs of thicker wire, and as I did so I found that the articulation became both clearer and louder. At last I substituted a solid substance for the springs that had gradually been made more and more inelastic, and then I obtained very marked improvements in the results. It then occurred to me that the whole question was one of pressure only, and that it was not necessary that the diaphragm should vibrate at all. I consequently put in a heavy diaphragm, one and three quarter inches in diameter and one sixteenth inch thick, and fastened the carbon disk and plate tightly together, so that the latter showed no vibration with the loudest

tones. Upon testing it I found my surmises verified; the articulation was perfect, and the volume of sound so great, that conversation carried on in a whisper three feet from the telephone was clearly heard and understood at the other end of the line.

"This, therefore, is the arrangement I have adopted in my present form of apparatus, which I call the carbon telephone, to distinguish it from others. [In this way was made the discovery which Professor D. E. Hughes has lately claimed to have originated, and on which the so-called microphone is based.]

"The accessories and connections of this apparatus for long circuits are shown in fig. 3. A is an induction coil, whose primary wire, *p*, having a resistance of several ohms, is placed around the secondary, instead of within it as in the usual manner of construction. The secondary coil, *s*, of finer wire, has a resistance of from 150 to 200 ohms, according to the degree of tension required; and the receiving telephone, R, consists simply of a magnet, coil, and diaphragm. One pole of the magnet is

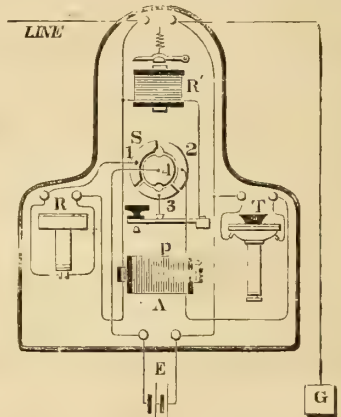


Fig. 4.

connected to the outer edge of the diaphragm, and the other, which carries the wire bobbin of about 75 ohms resistance, and is included in the main line, is placed just opposite its center.

"P R is the signaling relay, the lever of which, when actuated by the current from a distant station on the line in which the instrument is included, closes a local circuit containing the vibrating call-bell, B, and thus gives warning when speaking communication is desired.

"Besides serving to operate the call-bell, the local battery, E, is also used for sending the call signal. S is a switch, the lever of which, when placed at *o*, between *m* and *n*, disconnects the transmitter, T, and local battery, E, from the coil, A, and in this position leaves the polarized relay, P R, free to respond to currents from the distant station. When this station is wanted, however, the lever, S, is turned to the left on *n*, and depressed several times in rapid succession. The current from the local battery, by this means, is made to pass through the primary coil of A, and thus for each make and break of the circuit induces powerful currents in the secondary, *s*, which pass into the line and actuate the distant call-bell.

"When the call signals have been exchanged, both terminal stations place their switches to the right on *m*, and thus introduce the carbon transmitter into their respective circuits. The changes of pressure, produced by speaking against the diaphragm of either transmitter, then serve, as already

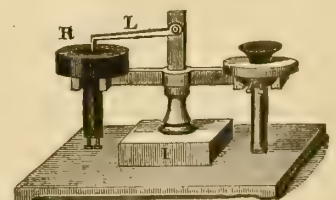


Fig. 5.

shown, to vary the resistance of the carbon, and thus produce corresponding variations in the induced currents, which, acting through the receiving instrument, reproduce at the distant station whatever has been spoken into the transmitting instrument.

* Abridged from "The Speaking Telephone, Talking Phonograph, and other Novelties," by Geo. B. Prescott.

"For lines of moderate lengths, say from one to thirty miles, another arrangement, shown in fig. 4, may be used advantageously. The induction coil, key, battery, and receiving and transmitting telephones, are lettered the same as in the previous engraving, and are similar in every respect to the apparatus there shown; the switch, S, however, differs somewhat in the construction from the one

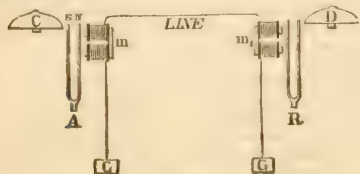


Fig. 6.

already described, but is made to serve a similar purpose. When a plug is inserted between 3 and 4, the relay or sounder, R', battery, E, and key, K, only are included in the main line circuit, and this is the normal arrangement of the apparatus for signaling purposes. The battery, usually about three cells of the Daniell form, serves also both for a local and main battery. When a plug is inserted between 1, 2, and 4, the apparatus is available for telephonic communication.

"I have also found, on lines of from one to twenty miles in length, that the ordinary cell can be dispensed with, and a simplified arrangement substituted. This latter consists simply of the ordinary receiving telephone, upon the diaphragm of which a free lever, L, is made to rest, as shown in fig. 5. When the induced currents from the distant station act upon the receiver, R, the diaphragm of the latter

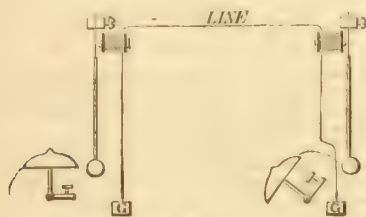


Fig. 7.

is thrown into vibration, but by itself is capable of giving only a comparatively weak sound; with the lever resting upon its center, however, a sharp, penetrating noise is produced by the constant and rapid rebounds of the lever, which thus answers very well for calling purposes at stations where there is comparatively but little noise."

Mr. Edison has also used direct and induced currents to release clockwork, and thus operate a call;

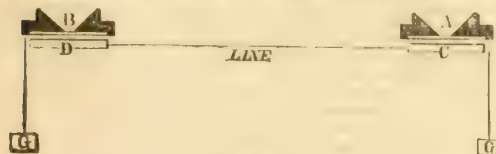


Fig. 8.

and by the further action of these currents on similar forks at a distant station, bells were caused to be rung, and signals given. Fig. 6 shows an arrangement of this kind. A and B are two magnetized tuning forks, having the same rate of vibration, and placed at two terminal stations. Electro-magnets, m and m', are placed opposite one of the prongs of the forks at each station, while a bell, C or D, stands opposite to the other. The coils of the magnet are connected respectively to the line wire and to earth. When one of the forks is set in vibration by a starting key provided for the purpose the currents produced by the approach of one of its magnetized prongs toward the magnet, and its recession therefrom, pass into the line and to the further station, where their action soon causes the second fork to vibrate with constantly increasing amplitude, until the bell is struck and the signal given.

For telephonic calls the call-bells are so arranged that the one opposite to the fork, which generates the currents, is thrown out of the way of the latter's vibrations.

Another call apparatus is represented in fig. 7. In this arrangement two small magnetic pendulums, whose rates of vibration are the same, are placed in front of separate electro-magnets, the helices of which join in the main line circuit. When one of the pendulums is put in motion, the currents generated by its forward and backward swings in front of the electro-magnet pass into the line, and at the opposite terminal, acting through the helix there, cause the second pendulum to vibrate in unison with the former.

Fig. 8 shows a form of electrophorous telephone, which acts by the approach of the diaphragm contained in A or B toward, or its recession from, a highly charged electrophorus, C or D. The vibrations of the transmitting diaphragm cause a disturbance of the charge at both ends of the line, and thus give rise to faint sounds. Perfect insulation, however, is necessary, and either apparatus can be used both for transmitting and receiving, but the results are necessarily very weak.

Another form of electro-static telephone is shown

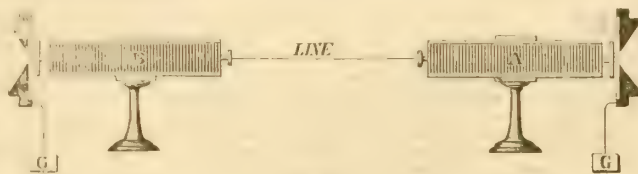


Fig. 9.

in fig. 9. In this arrangement Deluc piles of some 20,000 disks each are contained in glass tubes, A and B, and conveniently mounted on glass, wood, or metal stands. The diaphragms, which are in electrical connection with the earth, are also placed opposite to one pole of each of the piles, while the opposite poles are joined together by the line conductor. Any vibration of either diaphragm is thus capable of disturbing the electrical condition of the neighboring disks, the same as in the electrophorous telephones; and consequently the vibrations, when produced by the voice in one instrument, will give rise to corresponding electrical changes in the other, and thereby reproduce in it what has been spoken into the mouthpiece of the former.

With this arrangement fair results may be obtained, and it is not necessary that the insulation should be so perfect as for the electrophorous apparatus. Fig. 10 shows a form of electro-mechanical telephone. Small resistance coils (1, 2, 3, etc.) were so arranged with connecting springs near a platinum faced lever, B, in connection with the diaphragm in A, that any movement of the latter caused one or more of the coils to be cut in or out of the primary circuit of an induction coil, C, the number, of course, varying with the amplitude of the vibrating diaphragm. Induced currents, corresponding in strength with the variations of resistance, were thus sent into the line, and could then be made to act upon an ordinary receiving telephone. By arranging the springs in a sunflower pattern about a circular lever, articulate sentences have been transmitted by this method, but the results were very harsh and disagreeable.

Fig. 11 shows a form of the water telephone, in which a double cell was used so as to afford considerable variation of resistance for the very slight movements of the diaphragm. The action of the apparatus will readily be understood from the engraving, where a wire in the form of the letter U is shown, with the bend attached to the diaphragm, and its ends dipping into the separate cells, and thus made to form part of the circuit when the line is joined to the instrument at a and c.

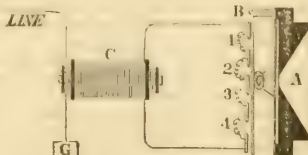


Fig. 10.

Mr. Edison is now conducting experiments with a thermo-electric telephone, which gives some promise of becoming serviceable. In this arrangement a

sensitive thermopile is placed in front of a diaphragm of vulcanite at each end of a line wire, in the circuit of which are included low resistance receiving instruments. The principle upon which the apparatus works depends upon the change of temperature produced in the vibrating diaphragm, which he has found is much lower as the latter moves forward, and is also correspondingly increased on the return movement.

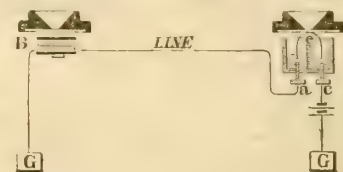


Fig. 11.

Sound waves are thus converted into heat waves of similar characteristic variations, and the inventor hopes to be able, by the use of more sensitive thermopiles, to transform these heat waves into electrical currents of sufficient strength to produce a practical telephone on this novel principle.

An interesting fact connected with telephonic transmission was discovered during some of his experiments with the magneto-telephone, which is that a copper disk may be substituted for the iron diaphragm now universally used. If a piece of copper, say one sixteenth of an inch thick and three fourths of an inch in diameter, is secured to the center of a vulcanite diaphragm, the effect becomes quite marked, and the apparatus is even more sensitive than when the entire diaphragm is of copper. The cause of the sound is due, no doubt, to the production of very weak electrical currents in the copper disk.

Plugmania.

This is a day of progress, of inventions, of discoveries, of scientific investigation and research. New wonders are being evolved from darkness every day, and the mind of man must be continually "on the wing," as it were, to keep pace with the times. Among telegraphers, more particularly than others, does this spirit dwell. It shows its fruits not alone in mechanical inventions, as witnessed by the telephone and phonograph, but also in the discovery of remedies for the alleviation of those most fatal diseases, telegraphers' paralysis and telegraphers' consumption; and, ere long we expect to see included that most despicable of concoctions, the salary grade.

Surely telegraph operators have afflictions in plenty already. I am loath to add another. But as I have the good of my fellow professionals at heart, I feel it to be my duty to shed whatever light I can upon their checkered pathway. The writings of our leading telegraphers—noticeably that of Werner—for some time past have developed a sentiment, in truth a disease, which I have christened plugmania. It is an ailment of the imagination. It haunts its victim like a guilty conscience. One plug is transformed into a thousand, or a million, or a billion, according to the state of the disease, and the unfortunate victim of plugmania imagines that each one of these numerous plugs is plugging away at him with all the pluggishness that he is in command of. Plugmania does not seem to be so destructive of life as consumption, or of limb as telegraphers' paralysis, but it distorts the faculties of the mind most distressingly, and launches a whirlwind of plugs upon its victim if he dare attempt the contemplation of telegraphic affairs even for a moment. The disease seems to be climatic, or peculiar to certain localities. Not a single case of it has ever been known on the Pacific Coast. It is most prevalent in eastern cities, particularly Chicago, New York, and Philadelphia. Now, as the advancement of every new idea that does not put money directly in people's pockets is sure to meet with strenuous opposition, and its promulgator declared a visionary schemer, and even a lunatic, it will readily be perceived that the existence of plugmania in the minds of our most expert eastern telegraphers and telegraphic writers, will be combated with sarcasm, ridicule, and contempt. Nevertheless, I maintain that the facts will bear me out in my assertion, and will fully satisfy any unprejudiced mind that there is such a disease as plugmania. I will spread before you the utterance and mind-contortions of a victim of this baneful disease, and allow you to judge for yourselves, and then if

any of you can suggest a cure or preventative of this distressful affliction, your names will go down to posterity along with those of Galileo and Newton and Jenner. It is with no feeling of animosity or ill-will toward my antagonistic friend Werner that I reproduce some of the wild ramifications of his mind as indubitable evidence of the existence of plugmania. The disease has a stronger hold upon him than upon any others of the fraternity—judging by their writings—therefore he will pardon me for selecting him as a means to secure an end.

In an article in *THE OPERATOR* of October 15, 1876, entitled: "A Study in Natural History—The Plug," Werner shows the first symptoms of Plugmania. In two short columns he has inserted thirty-eight plugs. These increase so rapidly that he sees "Great flaming volcanoes constantly emitting from their craters millions of animated plugplings, and scattering them broadcast over the land." In one breath he accuses Adam of being the first plug, and in another he says the plug was cotemporary with Professor Morse. Now he is a parasite clinging to a situation with bull-dog tenacity; again he is a nomadic creature found in great herds on our western railways. Read this suggestion of Werner's in regard to plugs, and then say that there is no such thing as plugmania: "Again, it would be no more than common honesty to display cautionary signals, by exposing a plug in effigy over every telegraph building, when the daily observations showed that a storm center of plugs was threatening the Gulf States, veering to northeast over Georgia and the Carolinas, with a light sprinkling of mild to ferocious plugs over Virginia and Pennsylvania."

Werner has genius, and wit, and talent, but, alas, he has plugmania also. Eradicate this disease from his brain, and Greeley's, Irving's, or even Shakespeare's mantle may fall upon him.

"Theophilus Gatch," a heterogeneous conglomeration of brilliant nothings, soaring after invisibles and diving after imaginary creations, is beyond a doubt the child of the plugmaniac. Upon every other subject but manipulating electricity the victim of plugmania is a rational creature, but the moment his mind reverts to the key, or the line, plugs fly at him.

"As bees bizz out wi angry fyke,
When plundering herds assail their byke;
As eager runs the market crowd,
When 'catch the thief' resounds aloud."

No one can read "Theophilus Gatch" without being convinced that the mind of the writer was influenced in a peculiar and puzzled manner, something after the fashion of the hunter that did not kill any birds because, as often as he aimed at one, another invariably flew between him and it.

Werner was certainly laboring under a very severe attack of plugmania when he wrote "What Constitutes a Plug." In that article he has used the word plug forty-nine times. He has charged him with all the crimes known to man. Hear how he raves: "The world is full of him (the plug), the world is too small to hold him; the very air is luminous with his presence, and the scarlet nose of the reckless California plug is as destructive to savings banks and stock transactions as the blue proboscis of the Calvinistic Nova Scotian. He is the grasshopper of the telegraph, and the record of his ravages is world wide." Poor Werner!

Werner seems to have a particular dislike to California and Californians. The thought of a California operator is as destructive to his peace of mind as the nightmare. It is so seldom that any one speaks other than in praise of California, and especially of her telegraphers, that were Werner not of the fraternity and an honorable man, I should be inclined to think that his exit from California had been hastened by an earthquake, or something equally as suggestive.

Operators afflicted with plugmania feast their minds upon wild ideas that are impossible of application. They devise murderous implements and infernal machines wherewith to torture their imaginary plugs. The volcanograph is one of them. The volcanograph alone is proof sufficient of the existence of plugmania. Is there a sane operator in the land so devoid of feeling, and so given over to cruelty as to be capable of constructing a machine that would "strike a man with seventeen million volts of dynamite battery in seventeen hundred different places inside of a second of time?"

Werner has given us still further proof of plugmania. In his article entitled "Consumption Among Telegraphers," he starts out with a fact, but scarcely pens a paragraph until he runs foul of a plug. In a moment that plug has increased to a million, he has assumed all kinds of positions, and

filled all kinds of situations in the telegraphic world, except commendable ones. Werner lashes him around the world with a spirit and humor that is really refreshing, and would be grand did he not soar beyond reason. But he is not himself. He is under the influence of plugmania.

The "animated battery" is another offshoot of plugmania. The wonderful combinations therein described put to blush the most renowned chemists of this or any other age, in truth such incomprehensible utterings savor almost too much of the infinite to be of the "earth, earthy."

I will refer to one more, and that the last one of Werner's productions, and then I will consign him to the sympathies of the gentle reader. Werner does not seem to wear his new honors with becoming meekness and appreciation. I refer to the leather medal presented him by his admiring friends on the Pacific Coast. His innate modesty and diffidence doubtless prevents him from manifesting his true feelings upon occasions like this. Then again he may not see his own worth and greatness as others do.

"O wad some power the giftie gie us,
To see oursel's as others see us."

He says that he does not wish a medal or any other recompense for his noble efforts in behalf of consumptive operators. Was ever such sacrifice of self, such nobleness of soul, displayed before? Just such traits as these endear him to us with martyr-like devotion, and did our salaries permit we would cover him all over with leather medals. He objects to the leather medal, too, because it is not an original idea, a late invention. Poor fellow, he is undoubtedly laboring under an attack of plugmania, for in the next breath he tells us about "out-Heroding Herod," a witticism so old and worn from usage, that it should be permitted to lie where time has buried it. Werner is very considerate and very condescending. He does not wish to offend us by what he may say about us, and for fear that he might, graciously offers to remain silent if we will pay him for so doing more than he is paid for talking. Misguided man! Surely plugmania has obscured your mind's vision. Your jocose attempts to decry us, and to poke fun at us disturb us not. True, you endeavor to ignore us altogether by speaking of our lively towns as Y's and switches, and our great highway of the nation as an "alleged railroad." Our noses are all scarlet and polished, and gambling and betting is our chief occupation. No matter, we are not offended. We are too generous and noble-hearted to attribute these hallucinations of your brain to your own true nature. We know how you are afflicted, and in imitation of our gracious Master, we forgive you, for you know not what you do.

No doubt there are many persons, officials and others, in the east, deserving of leather medals, but this fact will not justify Werner in refusing the lasting token of friendship and gratitude so unanimously tendered him by his admiring brother operators on the Pacific Coast. It was our intention to send the medal to him in a beautiful casket of sandal wood inlaid with diamonds, and bearing on the cover, in gold letters, the inscription:

OPERATORS OF THE C. P. R. R.

TO THEIR GREATEST BENEFACTOR

WERNER,

THE DISCOVERER OF A PERMANENT CURE FOR
TELEGRAPHERS' CONSUMPTION.

A LEATHER MEDAL.

But as Werner has signified his willingness to come out and receive it from our hands, we shall await his coming. Change of climate and associations is the only cure for plugmania, therefore he will be benefited in more ways than one. I would suggest, however, that it is not necessary that he should walk. A man with such a remarkable genius for dodging every question at issue can certainly beat his way on railroad trains with but few "firings off." We shall anxiously look for his coming, and from none will he receive a heartier reception than from SAMSON.

The telephone has lately been successfully used in France to communicate between a vessel being towed and one towing. The wire was carried along one of the hawsers, and circuit was completed through the copper on the bottoms of the ships and the water. Conversation was carried on very distinctly.

Sent Collect.

The snow was very deep, and the storm had so recently subsided that but few paths were made, and those few were poor ones; but the message I knew must be delivered, and not a boy or idle man did my anxious search around the station disclose. I wondered, as I put on my sack and hat, where all the loafers who had been gathered around the stove in the "gentleman's room" two hours before, had disappeared to, but my wondering brought no solution of the riddle.

There was snow to right of me, snow to left of me, and, oh! so much snow in front of me, as I walked away from the depot, and took my way toward farmer Aldrich's place, nearly half a mile away.

With the perspiration standing on my forehead, and my skirts wofully bedraggled, I at last stood before said farmer's front door, and gave a sounding rap thereon.

The woman who came in answer to my summons, informed me that I should find "the old man" in the back yard she "guessed."

Her guess was a correct one, and very soon I was saying in my blandest tones:

"Good morning, Mr. Aldrich. Rather snowy this morning. I have a message for you."

"What d'ye say?" was the answer, as the person addressed tossed a shovelful of snow very near my head.

"I have a message for you," I repeated.

"Wal, le's have it," he said, straightening himself up and pulling off one of his blue and white mittens.

"Yes, sir," I said, "but you will please hand me twenty-five cents. The message was sent collect."

"You don't mean to say I've got to pay for sending it?" he exclaimed slowly.

"Yes, sir. When a message is sent collect, the receiver pays the charges."

"Wal, that's a good one. Hand it here and le's see if it's worth twenty-five cents to me."

"That makes no difference," I replied. "I cannot give it to you until you pay me for the sending of it."

"What is it about?" he questioned. "Anybody dead or anything o' that kind?"

"You will know when you have read it," I said.

"Wal, I hope you're obstinate enough; but if I must pay for it, I s'pose I might as well, and done with it."

Down went his hand into his trousers' pocket, and came forth holding a piece of whiplash, two shingle nails, the stump of a lead pencil, and a ten-cent piece. Suddenly a thought seemed to strike him. He looked up and asked:

"Say, miss, how much of that plaguey dispatch is there?"

"Eight words, sir."

"Now I don't b'lieve it's worth twenty-five cents to tinker off eight words on one o' them brass things. Call it twenty, can't ye?"

"I do not make the tariff, and cannot change it," I answered, wondering meanwhile if there would be anything "most foul, strange and unnatural" in my rapping him over the head with his shovel, and so warming my fast stiffening fingers, and soothing my wounded feelings.

"Who does make it then?" was his next question. "The officers of the Company, I suppose," I replied.

"Wal, I wish you'd jist say to them officers that I've got some o' the best apples they ever see, and I'll give 'em a peck of 'em for that message."

"I shall do no such thing," I said, shortly, "and if you don't pay me at once, I shall go back to my office and take the message with me."

Thereupon his hands went upon another diving expedition, and after five minutes industrious fumbling, brought forth the necessary change, which was handed to me with the remark:

"You jist tell 'em I don't want no more o' their telegratins done for me. I guess a letter 'll do weil 'nough if they've got anything to say."

Many months have passed since that episode, but even now the word "collect" in the check of a message brings before my mental view a girl trembling with cold and anger, standing before a man in blue frock and overalls, from the pockets of which he produces many strings and nails, and little money. However the monosyllable "paid" may sound to others, it is to me the most beautiful word in the English language.

L. A. CHURCHILL.

An article in a recent number of the *Pekin Gazette*, written by Chin Hoo, says Kung Foo Whing, a distinguished philosopher who flourished about the year 976, invented the telephone—which is known in China as "Thumthsein"—in the year 968.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

July 15th, 1878.

COMMUNICATION between Key West and Havana has been restored by the repair of No. 3 cable of the International Ocean Telegraph Company. It is expected the duplicate cable (No. 2) will be repaired in a few days.

PROF. LANGLEY, of the Allegheny Observatory, accompanied by several scientists, has gone to Pike's Peak for the purpose of making observations of an eclipse of the sun on the 29th of July. Pike's Peak and Denver are in the path of the totality of the eclipse. Prof. Langley has made arrangements with the Western Union Telegraph Company for telegraphic service in connection with the observatory.

MR. W. H. PREECE, in a newspaper card, gives "the most absolute and unqualified denial" to Mr. Edison's statements in regard to his alleged breach of confidence in connection with Prof. Hughes' invention of the microphone. Mr. Preece claims that the microphone is "quite a different instrument from Edison's telephone." Mr. Edison has replied, giving many citations, etc., in support of his statement.

SAMSON, Mr. J. A. CLIPPINGER, replies in this issue to the letter of Werner on "California's Leather Medal," published in the issue of June 15th, and announces that he has made the important discovery that Werner is suffering from a new disease, which Samson calls *plugmania*. Go on, gentleman, we need a little excitement for the hot weather, and you are probably far enough apart to prevent your coming to blows.

ELECTRICITY as a motive power has hitherto been a comparative failure, as 90 per cent. of the battery has been wasted. Professor Edison has devised a novel electrical machine which he calls the Harmonic Engine, in which 90 per cent. of the power is realized. With two small electromagnets and three or four small battery cells, sufficient power is generated to drive a sewing machine or pump water for household purposes.

WE shall soon be ready to announce the early appearance of Mr. J. A. Clippinger's new book, "Sam Johnson, the Life and Experience of a Railroad Telegraph Operator," which is now in press, and will shortly be issued. The book will contain about 200 pages, of a size somewhat larger than "Oakum Pickings," will be substantially bound in strong paper covers, and sold at seventy-five cents a copy. Mr. Clippinger is a well-known California operator, a frequent contributor to the columns of THE OPERATOR under the *nom de plume* of Samson, and the author of "The Pedagogue of Widow's Gulch." It is expected that his present book, to the preparation of which he has devoted much time, will have a large sale.

Death of Superintendent Bedlow.

Mr. James S. Bedlow, Superintendent of the Western Union at Portland, Me., lost his life at Pine Point, Scarborough, June 2d, in rescuing a young girl from drowning.

It appears that about ten o'clock on that morning, Mr. Bedlow's brother-in-law, Mr. Kellogg, took Sophy, a little nine year old daughter of Mr. Bedlow, and a Miss Evans of about the same age, in swimming. Leaving Sophy in shallow water with an oar, he took Miss Evans further out for a swimming lesson. Suddenly Sophy screamed, and it was found that she was floating beyond her depth. Seeing this, Mr. Kellogg left Miss Evans in deep water, and swam to Sophy's assistance. Mrs. Bedlow in the meantime, hearing the screams, called her husband, who partially undressed, and rushed into the water. Mr. Kellogg, who had reached Sophy, told him to go to Miss Evans, who was about five hundred feet further out. Mr. Bedlow swam toward her at great speed, and succeeded in bringing her into shallow water. Telling Mr. Kellogg to take her ashore, he said he would himself swim in slowly on his back, being exhausted from the excitement and extra exertion. Five minutes afterward it was observed that Mr. Bedlow was motionless, and that his hat was floating away from him. Mr. Kellogg and another gentleman went at once to his assistance, and found that he had turned on his face, which was purple, and that life was apparently extinct. He was immediately taken to his cottage, and a medical gentleman who was at the beach tried for an hour and a half to restore him, but without effect. It is probable that his death was caused by syncope and a stoppage of the action of the heart, consequent upon the great exertion which he made to reach Miss Evans, the sudden chill from the cold water, and his anxiety of mind. The body was taken to Portland by the evening train.

At the funeral, which took place July 5th, and was very largely attended, the floral offerings were many and beautiful. Among the rest was a handsome basket from Superintendents Wood of Boston, Gates of White River Junction, and Clinch of St John, an exquisitely-wrought all wire basket from Charles E. Bliss and Charles I. Collamore, Mr. Bedlow's early friends and successors in the Bangor office; a large cushion of white flowers, with the word "Beloved" wrought on it in blue flowers, from the "operators on wire No. 10 East;" a cross from G. A. Hanscom of the Bath office; a lyre from the employés of the Portland office; a cross from the Portland operators; a pyramid, wreath and star from the employés of the Boston office; a Maltese cross from Portland Commandery, of which Mr. Bedlow was a member, and a harp, a laurel wreath, and other things from non-telegraphic friends. Telegraphers were present from Massachusetts, New Hampshire, Vermont, Maine and New Brunswick. The pall bearers, chosen from their number, were Assistant General Superintendent Charles F. Wood, of Boston, Superintendent G. W. Gates of White River Junction, Vermont, Superintendent R. T. Clinch, of St. John, Managers Geo. F. Milliken of Boston and Charles D. Livermore of Portland, Assistant Superintendents Suel Smith and J. W. Duxbury of Boston, and James W. Plaisted of Portland. Several lady operators were among the delegates, and a file of messenger boys in uniform completed their company.

After eloquent addresses by the Rev. J. K. Smith and Rev. W. B. Hayden, Templar Grand Prelate, the Rev. Wm. E. Gibbs, on behalf of the knights, spoke tenderly and lovingly of their lost companion, alluding to his having fulfilled the duty of a knight in laying down his life to relieve the distress of another. The body was buried in Evergreen Cemetery, the Commandery escorting it.

Mr. Bedlow was a native of Portland, and in the fifty-second year of his age. He was first employed in the Maine Telegraph Company's office, under Mr. Eddy, from which he was summoned in 1856, by Asa Woodman, the Superintendent in Portland, to take his place in that city, which the latter was obliged to surrender on account of failing health. Mr. Woodman died soon after, and from that time, Mr. Bedlow has continued in charge, except for a short time while James G. Smith was superintendent, during which time he took charge of the United States line. When the Western Union consolidated the different companies, he took charge of the division from Boston to Calais, and has managed it with signal ability, winning the esteem of the public and of the company.

He leaves a wife and five children, his eldest son being the Assistant Superintendent of his Telegraph Division, and his eldest daughter having just graduated at the High school.

Railroad Business During 1877.

From *Poor's Manual*, it appears that the depression of the three previous years in railroad business—which is nearly enough related to telegraphy to interest our readers—continues. Not only has there been a considerable decline in the construction of railroads, but the earnings also show a larger relative decrease than at any period in eleven years. The number of miles of railroad opened during the year 1877 was 2,177, against 2,657 for 1876, 1,758 miles for 1875, and 2,305 miles for 1874. No new lines of any considerable magnitude have been undertaken. The gross earnings of all the roads whose operations have been reported have equaled \$472,909,272, against \$497,257,959 for 1876, and \$503,065,505 for 1875; \$342,589,222 were from freight, and \$130,050,050 from passengers. The net earnings have fallen off \$15,476,055, as compared with 1876. The ratio of net to gross earnings was 36.16 per cent., as against 37.5 per cent. for 1876, equal to an increase of 1.36 per cent. in the operating expenses, as compared with the preceding year. The dividends have fallen off \$9,483,356, and are less than for any year since 1871. No dividends were paid on any of the railroads in the States of Arkansas, Colorado, Florida, Kansas, Louisiana, Mississippi, Missouri, Nebraska, Oregon, Texas and Vermont, nor, excepting on leased lines, in Iowa and Minnesota. The decrease of business has extended over all parts of the country, and the reduction in rates of transportation noted in 1876 has continued throughout 1877.

The principal decrease in earnings has been in the Middle States, due partly to the depressed condition of the coal trade, and partly to the falling off in passenger earnings, as compared with 1876, the Centennial year. In 1871, with only two-thirds as many miles of railroad in operation, and a little more than one-half the capital stock, the dividends aggregated \$56,456,681, equaling 4.19 per cent. of the capital then invested. The number of miles operated last year

was 74,112, and the capital invested \$4,568,597,248. The dividends paid aggregated \$58,558,312. The number of miles of railroad actually existing is 79,208, divided as follows: New England States, 5,822; Middle States, 15,166; Southern States, 13,840; Western States, 41,224; Pacific States, 3,156.

At the Physical Society, London, on June 8 Mr. Chandler Roberts read a paper for Prof. Hughes on the physical action of the microphone. The pith of the communication is contained in the following sentences: The problem which the microphone resolves is this: The instrument introduces into an electric circuit an electrical resistance, which resistance shall vary in exact accord with sonorous vibrations; thus producing an undulatory current of electricity from a constant source, whose wave length, height, and form shall be an exact representation of the sonorous waves. In the microphone they had an electric conducting material susceptible of being influenced by sonorous vibrations, and here they had the first part of the problem. The second step was one of the highest importance, for it was necessary that the electrical current flowing at this point should be thrown into waves of determinate forms by the sole action of the sonorous vibrations. This was resolved by the discovery that when an electric conducting matter was in a divided state, either in the form of powder, filings, or surfaces, and put under a pressure—far less than that which would produce cohesion, and more than would allow it to be separated by sonorous vibrations—the molecules in presence at the surface being in a comparatively free state, although electrically joined, did of themselves so arrange their forms, their number in contact, or their pressure, by increased size or orbit of revolution, that the electrical resistance of the circuit was increased and decreased in a remarkable degree. The problem being resolved, it was only necessary to observe general considerations to produce an endless variety of telephones, each having a special range of resistance. A man's voice required four surfaces of pine charcoal introduced in the circuit, or six of willow charcoal, or eight of boxwood, or ten of gas charcoal. The great desideratum now is an insulator of the sound.

TELEGRAPHS IN THE EAST.—One of the earliest telegraph lines in Eastern countries was a private line, erected in 1859, from Teheran to Sultanieh, where the Shah of Persia temporarily resided. This line, 169 miles long, after being used one summer, was abolished. There are now about 5,000 miles of telegraph in Persia alone. Of the construction of the last of these lines, that from Shahrud to Meshed, the Persian Inspector-General of telegraphs says, "The workmen suffered very much from want of water and from heat. During the two months of June and July, [1876] the heat in the plains, with quite a cool wind blowing, rose to 140° Fahrenheit, while the heat in the shade once rose to 112° Fahrenheit. Great anxiety was felt on account of the Turcomans, who were expected to attack us every day, but not a single Turcoman was seen." The first through telegraph to the far East was erected by the Turkish Government in 1863, and proceeded from Constantinople through Asia Minor, by way of Mosul to Bagdad. In 1864 the Government of

British India built a line, on iron standards, from Bagdad to Fao, at the head of the Persian Gulf. This line was subsequently handed over to the Turks, and was deemed so unsafe, passing as it did through a region where the Porte had really little or no authority, that after the submarine cable from Fao to Kurachee had been laid, a telegraph line was put up by British officers, but at the cost of the Persian Government, from Bushire via Theran to Bagdad.

A PETITION has been addressed to the Governing Committee of the Stock Exchange signed by all the most prominent commission houses of the street declaring that the permission granted to the "bucket shops" to use the indicators is a violation of the contract made by the Stock Exchange with the Gold and Stock Telegraph Company, and results in serious detriment to their business. It calls upon these gentlemen to at once decide upon some action to abate the evil. Some months ago the managers of the Gold and Stock Telegraph Company decided upon the removal of the instruments, but the bucketshop men banded together and obtained an injunction against their removal. Since that time the matter has remained in abeyance, wrapped up in the chicanery of the laws delays, to effect which the bucketshop men are said to have assessed themselves with great liberality.

The brokers of the street, however, have long considered the blackboard men as neither more nor less than pirates preying upon a business to which they have no right, either from apprenticeship or service, yet permitted by fossilized authorities to use the very quotations made by the Stock Exchange to the injury of its trade.

The Gold and Stock derive a very handsome sum as rental for the indicators supplied these "bucket shops," and does not, therefore, care to push the matter, but maintains an attitude of masterly inactivity that gladdens the heart of the "bucket shop" men.

At the regular monthly meeting of the Electrical Society of the Ohio Valley, July 1st, several new members joined the society. Mr. N. W. Lord read a paper on "Battery Measurements," and Mr. I. N. Miller, of Chillicothe, followed with one on "Lightning Rods." The latter was in reply to a paper read by Mr. Chambers at a previous meeting, advancing the theory that lightning-rods with properly constructed points, and without ground connections, are correct in principle and safe in practice, as diffusing the atmospheric electricity into the air instead of conveying it to the earth. Mr. Miller ridiculed the idea, quoting from numerous standard authorities to sustain his position, and demonstrating by experiment the advantage of ground rods as at present constructed over the air rods, championed by Mr. Chambers. After remarks by Prof. Clark and others, and some discussion, it was resolved "that in the opinion of this society a good ground connection is essential to a perfect lightning rod."

MR. EDISON is engaged in measuring the noise made by the Metropolitan Elevated Railroad. The instrument he uses is called a phonautograph, or self-registering phonometer.

WESTERN UNION stock is quoted at 89½, and A. & P. at 28.

As will be seen from advertisement in this issue, Mr. Alfred F. Moore, surviving partner of the firm of Joseph Moore & Sons, the well-known Philadelphia manufacturers of insulated wires, will conduct the business in future under his own name. The place of business has also been removed from China Street to numbers 200 and 202 North Third Street, corner of Race. The house was established as long ago as 1820, and has a very excellent reputation for the quality of the goods it turns out. This, of course, will be fully sustained by Mr. Moore, who has had charge of the manufactory for a number of years.

MR. E. O. CHASE, who has written many interesting articles for THE OPERATOR, under the *nom-de-plume* of "Nuf Ced," was married, June 27th, at Lynn, Mass., to Miss Lizzie E. Flanders, of that place. The happy pair have our best wishes for a pleasant and prosperous voyage through life. Mr. Chase is now out of the telegraphic business, and is engaged in the manufacturing business at Newark, N. J.

THE New York Tribune and the London Telegraphic Journal publish a long letter from Prof. D. E. Hughes denying that his microphone is a piracy on Edison's carbon telephone, and asserting that the microphone was worked successfully months before Edison's telephone reached England, and is, in fact, "entirely different in principle, action, form, uses and results."

Themes for the Thoughtful.

Believe not ill of a brother till it is proved beyond doubt.

Many kind hearts beat beneath seeming cold exteriors.

Be respectful to all men, that you may command respect.

Do as your conscience dictates, and you will not go far astray.

Study all things of nature in your daily walk through life.

Judge not from appearance lest you might err in your judgment.

Great things are not accomplished by idle dreams, but by years of patient study.

It is with life as with coffee; he who drinks it pure must not drain it to the dregs.

The rich are more envied by those who have a little than by those who have nothing.

Everybody seems to think himself a moral half bushel to measure the world's frailties.

If you would not have a person deceive you, be careful not to let him know you mistrust him.

Kind words are better than gold, and the voice of a friend has saved many a man from ruin.

Be happy if you can, but do not despise those who are otherwise, for you know not their troubles.

Some of the grandest things which have been achieved were by those whom we thought our inferiors.

Narrow not your mind to your own selfishness, but give it a broad field for your fellow-men to work in.

It is not worth while to think too much about doing good. Doing the best that we know minute by minute and hour by hour, we insensibly grow to goodness as fruit grows to ripeness.

In the cities of the dead the houses are small and close together; and a thistle is as liable to grow from a rich man's grave as a daisy is from the mound that covers the dust of a beggar.

Those who expect the most are liable to the greatest disappointments. A man of numerous desires is of all beings the most dependent. He who contracts and simplifies his wants will secure the greatest amount of happiness.

Fire Alarm Telegraphs in Germany.

Mr. R. von Fischer Treunfeld, F. R. S., has recently read before the Society of Telegraph Engineers a valuable paper on this subject. Among other facts, he states that in London, although there exists in that city a very efficient fire brigade, but no automatic system of fire telegraph, the proportion of serious fires reaches ten per cent. of the aggregate of all conflagrations; whereas in Berlin, where the fire department is not so well organized, but where an automatic telegraph system does obtain, the proportion is but two and eight-tenths per cent. This difference he attributes to the fire telegraph used in the German cities, an account of which, as located in Hamburg, he gives as follows:

Hamburg possesses two central stations, the central fire brigade station and the central police station. Both stations are connected to seven district lines, which run radially from these centers to the suburbs, each line being connected with a number of fire brigade and police stations, as well as automatic fire annunciators. The chief object of these seven lines, with their annunciators, and fire brigade and police stations, is to send immediate notice to the brigade stations from the locality wherein the fire is first discovered. Besides this, telegraphic communication can be maintained between the different stations (as well as from the annunciators to the central stations) so that the required assistance may be properly disposed of. In this system it will be observed that all fires are first announced to the central station, and that all arrangements for the suppression of every fire are made from this central station, which thus regulates and controls the entire system.

The automatic fire annunciator is a very simple mechanical contrivance, introduced into the telegraph line, through which circulates a permanent current from a battery established at the central station. The annunciator, when brought into action, breaks the circuit, and thus sends a certain signal to the central station. The breaking of the circuit is caused by the rotation of a contact wheel, the periphery of which is so shaped that the contact breaking corresponds to a certain Morse signal, and each signal to a certain district or street of the town. The annunciator is protected by a glass front, and is placed at street corners, in guard or railway stations, or in pillars situated in a prominent position, and where there is little likelihood of its being wilfully damaged. On the discovery of a fire all that has to be done is to run to the nearest annunciator box, open or break the protecting glass, and pull the handle. The contact wheel then rotates, and the letter corresponding to the annunciator is transmitted several times in succession to the central fire brigade station, whence orders are telegraphed to the various engine and police stations.

There are, besides the two central stations, forty-seven Morse stations and fifty-three automatic annunciators, that is to say, one hundred and two places from which the outbreak of a fire can be announced by telegraph. Both annunciators and Morse are connected to the same line, the former being situated at prominent places, as previously mentioned, the latter at fire brigade and police stations. The apparatus employed in the stations at Hamburg are Morse ink writers, with the usual complement of details. From the batteries, consisting of three hundred and fifty Meidinger elements, fifty for each district line, a permanent current flows through the lines, all signals being made by breaking the circuit. The seven radial district lines all unite at the central fire brigade station, to which all fire alarms are first sent, and from which the requisite orders are immediately issued to the stations in the vicinity of the fire. By the different stations being thus connected together, every facility is afforded to each station to give its help to the others, as circumstances may require.

The telegraph lines are preferably underground, and consist of 151,631 feet of underground cable and 126,641 feet of overground line, the latter in the suburbs of the town only.

The working of the system is as follows: All stations except the central have their Morse instruments cut out, and only a loud sounding alarm in circuit. A signal sent by any of the annunciators or Morse stations is recorded at the central station on a self-starting Morse, attached to that line. The central station, after receiving this signal, sends, by means of a magneto inductor, the fire alarm to all the stations of the district, or, if need be, to all the stations of the seven districts simultaneously, by means of a commutator fixed for this purpose. The operator at each Morse station, by a slight pressure of his foot on a lever, brings his instrument into circuit, and by this means each station is ready to receive orders

from the central station, to which the exact position of the fire has been previously made known. The arrangement is such that when the operator takes up his position at the table, the instrument is brought into circuit by means of the lever contact maker. As soon as he departs from this position the instrument is cut out of circuit. In this way there is no chance of delay or failure from forgetfulness on the part of the operator. The alarm signal is instantly followed by definite orders to the fire brigade and police stations nearest the fire. Having thus shown the arrangements and working of the radial system as in operation in Hamburg, the author explains the circular system of fire telegraphs, taking that in use at Amsterdam as an example.

The town is divided into three main circles (not including the suburban circle), the offices in each of which are in communication with the central station. Only fire brigade and police stations are in these main circles, and they are so connected that the police stations are situated in one half and the fire brigade stations in the other half of the circles. By this arrangement the two may be disconnected from each other, and enabled to communicate independently with their own central office. To each of the three main circuits a number of divisional circuits is attached, having their centres in one of the fire brigade stations. These divisional circles contain, as a rule, only automatic fire annunciators, although this rule is not altogether absolute. The entire arrangement shows that there are fifty Morse apparatus and one hundred and thirty-five annunciators in use. In all there are one hundred and fifty-nine places from which fire alarms may be given by telegraph. All the lines are worked on the closed-circuit system, the batteries of the Meidinger form being at the central station. The automatic annunciators have, besides the clock-work required for the movement of the contact wheel, a Morse key, a galvanoscope, and a lightning protector. By means of the key messages can be sent to the station of the division if required. The Morse apparatus in the stations is fixed in the same way as in the Hamburg system. In the central station is a magneto-inductor, by which the alarms of all stations may be rung, and, by an agreed combination of bell signals, either all or any single station may be called by the central station. The working of the system is similar to that in use at Hamburg. All stations, except the central, have their Morses "out" and their inductor bells "in." As soon as the central station receives a fire signal, the alarm call is given by the magneto-inductor, and each station puts its Morse in circuit in the manner already described, to receive orders from the central station. The latter is provided with a special commutator by which any of the stations may be individually called by bell, or all sections simultaneously called together, and a message dispatched to all at the same time. The magneto-conductor send a series of alternating currents, giving the fire alarm, which is received on the station bells.

The Steamship that Laid the Direct Cable.

Lying alongside pier No. 43 North River, in this city, is a huge iron steamship, that arrived in port last Saturday night, and has ever since attracted the attention of all who have passed her. Her size alone is enough to mark her as an extraordinary ship; but her chief peculiarity is her shape, and her great breadth of beam. She is sharp at both ends, and were it not from the rake of her masts and chimneys, and the greater elevation of her bows, it would be difficult, at a short distance, to distinguish her bow from her stern. She is the cable ship *Faraday*, the third largest merchant ship in the world; and no one who passes within half a mile of her need remain in ignorance of her name, for it is painted in gigantic white letters nearly four feet long, on both sides of her bow and stern. The *Faraday* was built at Newcastle, England, in 1874, for the firm of Siemens Brothers, of Woolwich, the largest telegraph supply manufacturers in the world. She was built expressly for the laying and repairing of submarine cables, and was completed, ready for her work, at a cost of \$1,250,000. Her first work was in 1875, when she laid the Direct Cable from Ireland to the United States. This cable was made and placed in position by the Siemens, who have also the contract for keeping it in repair. After laying the cable and repairing several breaks that occurred in it, the *Faraday* lay for thirteen months in Halifax harbor, anticipating further breaks in the cable, for those that had occurred were thought to have been affected by the enemies of the Direct Cable Company. The great ship was then ordered home, and early last Fall was sent to this country

on an experimental voyage to pick up a general cargo. Since then she has made four voyages, and is now on her fifth of the same character, between London and New York. She comes over in ballast, and returns loaded with grain, horses, and cattle. She is consigned to the Henderson Brothers, of the Anchor Line.

A general description of her exterior appearance may briefly be given as follows: She is 360.4 feet long over all, has an extreme beam of 52.3 feet, and depth of hold of 34.7 feet. She is 4,908 tons burden, and is propelled by two screws worked by two engines of 250 horse power each. She has three masts, is barkentine rigged, and has two chimneys set well aft and painted black. Her stem and stern are both sharp, and she has no bowsprit, but has instead a pair of heavy iron girders, projecting some twenty feet from her bows, and shaped like a horse-shoe magnet, with the opening inboard. At the outer end are two large iron sheaves or iron wheels, over which a cable may run. A similar arrangement projects over her stern. These are known as the forward and after girders, of which the former are used for picking up a cable and the latter for paying it out. Inboard her appearance is still more curious. Extending down thirty-five feet from her main deck, and covered with wooden gratings, are three immense iron tanks, like great wells. They are about forty-two feet in diameter, and were built for the stowing of thousands of miles of cable, which was coiled about iron cones rising in their centre nearly to the top. At present these cones are out, and the two after tanks are used for the stowing of grain in bulk. They will each hold 42,000 bushels of Indian corn. The powerful engines are between the main and the forward tanks, of which the latter is used as a coal bunker. Of course, each of these tanks is a vast air-tight receiver, either one of which would keep the vessel afloat should a colliding vessel crash into the others. These tanks rest on an iron, air and water tight, deck, known as the ballast deck. Below this is a clear space of six feet in depth, which, when the ship is light, is filled with water ballast, and with air when she is loaded. She has thus a double bottom, and would stand an immense amount of thumping on rocks without material injury. Between the ballast and main decks are three other decks. The sides of the main decks are at present occupied by long ranges of white-washed stalls, for the accommodation of horses and cattle. On her last voyage to London she carried 289 horses, 25 head of cattle, 133,000 bushels of grain, and a general cargo. Over the main deck has been built a temporary hurricane deck, which can be readily removed whenever the ship is again called upon for cable work.

Although a crew of 100 men is necessary for the management of the great ship, most of the work is performed by steam and electricity. The two propelling screws, one on each side of the sharp stern-post, have each an engine, and can be worked independently of each other, the one forward and the other backward at the same time if necessary. At either end of the ship is a rudder, both of which can be used at once, or one or both may be locked immovably. The steering gear is a very small wheel, located in a roomy wheel-house amidships and just under the bridge, that can be turned with one finger, and connects with a steam steering apparatus on the deck beneath. On the bridge are two dials, above which are brass handles, by the pushing of which one way or the other a bell is rung in the engine-room, and short sentences are communicated to the engineer. If he understands he repeats them, and they are noted on the faces of the dials. Away forward, in the bows, is an iron light-house, some fifteen feet in height, and large enough to contain two men. From its summit is thrown an electric light that will penetrate a mile through the most dense fog.

Of the ten large boats that encumber the decks of this queer ship, two are life-boats that, filled with water, will empty themselves in a few seconds; one is a steam launch that can make ten knots an hour, and the rest are yawls, jolly boats, etc. Just abaft the wheel-house is a system of iron wheels and gearing, connected with a steam winch below, constituting the sounding-machine. The sounding-line is of very fine steel wire, and the leads are so constructed that they detach themselves from the line immediately upon touching bottom, allowing the wire to be drawn up with great rapidity. By this means a depth of two and a half miles has been sounded from the *Faraday's* deck, and the distance recorded, inside of seven minutes and nineteen seconds.

Among the many pieces of queer apparatus scattered in every part of the ship, none is more inter-

esting than the life-saving bomb and rocket-mortar, placed away aft, at the open end of the after girder. The mortar is a powerful little piece, requiring half a pound of powder to the charge. The bomb is conical, and has at the outer end three short flukes, turning on iron pins, so that, as the projectile flies toward the land, they shut closely about it, and offer but little resistance to the air; but the moment they strike the shore, and a strain is brought to bear upon them, they are pulled open, and one of them is certain to secure a firm hold. In the other end of the projectile is an iron sheave or pulley-wheel, running very easily, over which the line is rove, and both ends kept on board the ship. The Faraday has accommodations below for 200 persons, which is the number required in cable work. On a voyage such as the present all the spare state-rooms are filled with cargo. Excepting war vessels, there are in the world but two ships larger than the Faraday—the Great Eastern and the Hooper. The latter is also a telegraph ship, built a year later than the Faraday, for the laying of cables. She measures but 207 tons more than the Faraday, and is not so long by 22 feet. She is also at present in the carrying trade between Liverpool and Boston. The Faraday is not a fast ship, having been built for eight knots, though she really makes ten, and she occupied fifteen days on her last voyage from London to this port. Her commander is Capt. S. Trott, who has sailed her from the first.

An Engineer's Story of How "Bogy" Prevented a Terrible Collision.

I run the night express on the B— Road. We always have at least two sleepers and a coach, and sometimes as many as two hundred passengers. It's a good road, level as a floor and pretty straight, though there is a bad spot or two. The night express has the right of way, and we make fast time. It's no rare thing for us to skim along at the rate of fifty miles an hour for thirty or forty miles, and we rarely go below thirty. One night I pulled out of Detroit with two sleepers, two coaches, and the baggage and mail cars. Nearly all the berths in both sleepers were full, and most of the seats in the coaches were occupied. It was a dark night, threatening all the time to rain, and a lone-some wind whistled around the cab as we left the city behind. We were seventeen minutes late, and that meant fast time all the way through.

Everything ran along all right up to midnight. The main track was kept clear for us, the engine was in good spirits, and we ran into D—as smooth as you please. The express coming east should meet us fifteen miles west of D—, but the operator at the station had failed to receive his usual report from below. That was strange, and yet it was not, and after a little consultation the conductor sent me ahead. We were to keep the main track, while the other train would run in on the side track. Night after night our time had been so close that we did not keep them waiting over two minutes, and were generally in sight when they switched in.

When we left D— we went ahead at a rattling speed, fully believing that the other train would be on time. Nine miles from D— is the little village of Parto. There is a telegraph station there, but the operator—who at that time was the great American traveler Bogardus, so well known among the telegraphic fraternity—has no night work. He closed his office and went home about nine o'clock, and any messages for him were held above or below until next morning. When I sighted this station I saw a red lantern swinging between the rails. Greatly astonished, I pulled up the heavy train, and got a bit of news that almost lifted me out of my boots. It was God's mercy as plain as could be. It was "Bogy" who was swinging the lantern. He had been roused from sleep by the whistles of a locomotive, when there wasn't one within ten miles of him. He heard the toot! toot! toot! while he was dressing, and all the way as he ran to the station, thinking he had been signaled. Lo! there was no train there. Everything was as quiet as the grave. The man heard his instrument clicking away, and leaning his ear against the window he caught these words as they went through to D:—

"For God's sake, switch the Eastern express off quick! Engineer on the western express crazy drunk, and running a mile a minute!"

Bogardus signaled us at once. We had left D. nine miles away, and the message couldn't have caught us anywhere except at Parto. Six miles further down was the long switch. It was time we were there, lacking one minute. We lost two or

three minutes in understanding the situation and in consulting, and had just got ready to switch in where we were when the head light of the other train came into view. Great heavens! but how that train was flying! The bell was ringing, sparks flying, and the whistle screaming, and not a man of us could raise a hand. We stood there on the main track, spell-bound as it were. There wouldn't have been time, anyhow, either to have switched in or got the passengers out. It wasn't over sixty seconds before that train was upon us. I prayed to God for a breath or two, and then shut my eyes and waited for death, for I hadn't the strength to get out of the cab.

But God's mercy was revealed again. Forty rods above us that locomotive jumped the track, and was piled into the ditch in an awful mass. Some of the coaches were considerably smashed, and some of the people badly bruised, but no one was killed, and of course our train entirely escaped. Satan must have cared for Big Tom, the other engineer. He didn't get a bruise, but was up and across the fields like a deer, screaming and shrieking like a mad tiger. It took five men to bind him after he was run down, and to-day he is the worst lunatic in the State. Tom was a good fellow, and used to take his glass pretty regularly. I never saw him drunk, but liquor kept working away on his nerves till at last the tremens caught him when he had a hundred lives behind his engine. He broke out all of a sudden. The fireman was thrown off the engine, a steam turned on, and then Tom danced and screamed and carried on like a fiend. He would have made awful work but for God's mercy. I'm trembling yet over the way he came down upon us, and I'll never think of it without my heart jumping into my throat. That night turned me forever against intoxicating drinks. Tom is still raving, and the doctors say he'll never recover his reason again.

Dangers that Beset Submarine Cables.

Every one who has at all studied oceanic telegraphy perfectly understands the dangers to which the shore ends of the communicating wires are exposed from the action of currents, the anchors of ships, &c. But the general idea prevailed that once the cable was laid in the gloomy depths of the ocean, it was in safety. Such, however, is not the case, for the inhabitants of those regions seem to resent the intrusion. In many cases, owing to the inequalities of the bottom of the sea, the wires cannot rest wholly on the bed, but in some places hang in festoons. Then they are liable to accidents from the larger denizens of the sea, among which we may particularly mention the sun-fish (*Orthogoriscus*). That peculiar but little known animal is nearly circular, of a brilliant silvery white, and at night emits a powerful phosphorescent light, whence its name probably arose. When swimming it turns round like a wheel, and moves with great rapidity. It grows to an enormous size, often attaining four feet in diameter, and some of them are said even to reach eight feet. Specimens have been caught weighing 500 pounds. It is found in all seas from the Arctic to the Antarctic Circle. Where the tail is in ordinary fishes, this curious creature has a sort of flattening in its circular shape from which bony spines project. Not long since an interruption occurred in a cable, and on examination it was found that it had been penetrated by one of the caudal spines of the sun-fish. Even when the wire lies quiet at the bottom it is not safe, for a species of marine weevil attacks the gutta-percha and gradually destroys the conductivity. But the most curious instance of damage inflicted on a cable is that which lately befell the one from Portugal to Brazil. A fault having been found, the tests were applied, and the precise spot indicated. The wire was fished up and was discovered to be broken. In one of the ends was entangled a large whale. The monster was covered with parasites, and in attempting to free itself from its tormentors, had broken the cable, and then managed so to twist itself in the coils of one end that it was held fast as a prisoner, and, not being able to rise to the surface for air, was drowned.—*Galignani's Messenger*.

The microphone is another marvelous invention. By it the faintest sounds are magnified to the dimensions of a thunder-clap. With the microphone a farmer can hear a potato bug coming down the road a quarter of a mile away, and can go out with an ax and head it off.—*Danbury News*.

The Detroit *Free Press* says that Mr. Edison's epitaph will be, "The man who was talked to death."

A Request that was not Granted.

We have received a copy of a letter received by Mr. Edison from "a poor devil of an operator," as he calls himself, in the wilds of Pennsylvania, requesting the great inventor to make him a present of a pair of carbon telephones, and to consider the epistle confidential. The confidential communication was referred by Mr. Edison to the Western Union folks in New York. By them it was forwarded to Superintendent Merrihew, by him to an assistant superintendent, by the latter to a chief operator, and finally returned to the writer. Like the Buffalo paper's report of the cow being swept over Niagara, ending with the words, "the cow is now dead," we may add that Mr. Edison did not send the telephones. Here is the letter, the date and place being considerably omitted:

PROF. THOS. A. EDISON.—*Dear Sir*: Would you please inform me what you can sell me a pair of your carbon telephones for, or if you can sell them at all, and if you do not sell, where I can purchase a pair, or if you cannot do anything else, make me a present of a pair (cool!). I am a poor devil of an operator on starving salary, and cannot afford to rent them, and would like most devilish well to have a pair of your telephones. I would propose sending you a splendid basket of fresh mountain speckled trout for your kindness, if acceptable. That is about all this country produces. What do you allow, anyhow? You must excuse my boldness in thus addressing you, but could not think of any other place to get a pair of your carbon telephones. Please consider this confidential and oblige

Yours truly,

A Voice of Long Ago.

"Just give me a chance to pour my voice into that machine, will you?" said a red-nosed man, stepping to the front at a phonograph matinee the other day.

"Certainly," said Mr. Gilliland. "Put your mouth down close, without pressing, speak distinctly, and the instrument will repeat every word exactly as you say it."

"Ain't you joking, now? Will it really say the same thing I say, without any mixing up and changing around, to turn the joke?"

"You will get back your own words—nothing more nor less," said the proprietor.

"Hold my hat, then, and pull open all the valves," said the man, as he nervously brought his mouth to the proper position. "Steady now, I'm about to warble."

"Come—up—boys—every—body—and—drink—with—the—landlord!"

Was what the man said, with an emphasis on every word, and the same was what the marvelous little wonder shrieked back.

"That's the sweetest music I've heard for about ten years," said the man, with a moist palate and a glowing eye, "and I reckon it's about that long since I've heard that good old tune ground out. I don't s'pose I'll ever get another chance to hear it again, and if it ain't too much trouble, please run her back and shoot it out once or twice more. It's good for the rheumatiz, that is. My! what a head that man has! If he could only get up a jug, now, that could never be emptied!" and the man walked out with a sad look and an unsteady step.—*Cincinnati Breakfast Table*.

Chicago Notes.

Ye festive scribe who strolls among ye telegraphic force, doth scoop the little item in from many a fertile source. He noteth down the changes new, which frequently are made, and semi-monthly in these notes before you they are laid.

The matrimonial noose has recently encircled a willing victim in the person of Mr. Chas. H. Johnson, of the St. Louis quad, who was married, June 6th, to Miss Rose Sanderson of this city. The affair was very quiet, a few friends only being in attendance. Among the many elegant presents was a silver cake basket, presented by Charlie's intimate friends in the office. Mr. Thos. P. Dudley, of Buffalo, has joined the extra night force. Other acquisitions are Messrs. Welner, Herbel and Scheckler. The latter named gentlemen is making hosts of friends by his obliging disposition and efforts to please. Mr. E. Payson Porter, of the night force, has resigned and entered other business. Dr. Dor-

Chester has been transferred to the Cincinnati quad, days. Mr. Emery, recently of Salt Lake, stopped with us a few days upon his way east last week. Mr. M. L. Lawson has just returned from a two weeks' vacation, with health and spirits greatly improved. Mr. Jack McRobie, who has been very sick for a month past, is improving rapidly, and hopes soon to return to duty. The number of pleasure-seekers this summer will be comparatively small, on account of the stringency in the "money market" caused by late "salary grab."

New York Telegraphers' Rifle Club.

The first regular meeting of the recently organized Telegraphers' Rifle Club was held in the rooms of the Western Union Supply Department, at six p. m., July 10th. The immediate occasion of the call for the meeting was the formal presentation to the club of an elegant Sharp's wide range rifle, with all the accoutrements, as a prize for competition. Mr. P. B. Westervelt, of the Western Union factory, on behalf of the employees of that establishment presented the rifle, accompanied by suitable remarks, in which he said that it was their desire to express their appreciation of their being invited to participate in the telegraphers' match, and as an encouragement to the attainment we aimed at as skilled marksmen. President Doran responded on behalf of the club, and said that the purchase of so magnificent a prize by the employees of the factory had been so complete a surprise to him that he could scarcely realize that it was a fact until he had actually handled the rifle. Since the inception of these friendly contests for the championship, it had been his pleasure to be brought in contact with many of the employees at the shops whom he had never met before, and he hoped that the present expression of good fellowship would be continued by the mutual contests for the possession of the valuable prize which he now accepted on behalf of the club, but he gave them fair warning that the prize would be really earned, and that whoever won it must make a high score.

The prize rifle is valued at \$75, and must be won three times by the person who becomes its permanent possessor. According to the conditions made by the donors it must be shot for at two hundred yards actual distance, Hartung's Park Range, Mott Haven. It was further decided by the club that the position be standing, using the Ballard mid range rifle and Creedmoor target. This match will be entirely distinct from the competition for the championship badge, which takes place at Zettler's Gallery, 207 Bowery, on July 27th.

Until the adoption of the Constitution and By-laws, members will be admitted upon payment of fifty cents initiation fee to M. N. Doran, Western Union Supply Department, which entitles them to competition in any of the matches upon payment of the regular entrance fee for the same.

Juno Reaffirms What He Said Before.

Remembering this to be the nation's natal day, the birth-day also of truth and justice, we deem it an appropriate time to say a word to the many silent watchers of events here in relation to the "Juno" letter. We would say, then, that "Juno" knew whereof he spoke in regard to the charges in that letter, and further, under certain conditions, courts an opportunity to make good his allegations. There is not a sentence we would retract or modify, save one. We accused Mr. Jones of working extra under an assumed name. That was a mistake, and if it is any consolation to him, he has the benefit of the retraction. We wish to say further, for the benefit of those who believe in the inherent honesty of this dynasty, that we know, beyond the question of a doubt, that the half has not been told in this particular; and we further charge, (and we base the charge upon facts that would convict in any court of justice) that "the old, old story" has been repeated since. President Green personally ordered the pay-rolls made out in ink instead of pencil. We assert with equal firmness, that Mr. Cobb did not at any time, as alleged, admit that he alone was criminal, and we defy successful contradiction. JUNO.

Chicago, July 4th, 1878.

Echoes from 197.

The honorary degree of Doctor of Philosophy has been conferred on Mr. Edison by Union College.

By special request of the ladies, Miles O'Reilly has withdrawn his resignation.

Telegraphic communication has been established between the Tombs and Police Headquarters in this city.

There is not a particle of truth in the rumor that Perry Chamberlain is a deserter from Pat. Gilmore's band.

The "old timer" is becoming as great a curiosity as the private soldier of the war of the rebellion. He is dead, or lost, strayed or stolen possibly, but all the same he is gone.

For the sake of the unfortunate East, it is to be hoped that the Earl of Beaconsfield will send over for that great diplomat, Mr. Stratton. British interests will suffer by his absence.

Peter McCawley, who has just been transferred from "Fx" to the main office, is a native of Constantinople. He possesses the Turkish national characteristics, being simple, serious and brave.

This is the time that an operator's fancy pierces through the baking bricks and mortar and roves to gurgling streams in whose shaded pools speckled fish move like noiseless and beautiful phantoms.

Mr. W. H. Hoyt has completed ten years of continuous service on the Providence, R. I., wire. During that period the business has increased from 125 to 500 messages daily. He looks like what he is—a perfect gentleman.

The action of Mr. W. H. McEnroe in sending sympathizing notes to the backers of the London Rowing Club, in the office, previous to that club's race with the Shoewacacettes, is on a par with that of a resident of a neighboring city, who, mistaking the rising moon for a conflagration, turned in an alarm, and while racing toward the supposed fire, the new steam fire engine was upset and smashed, many persons being badly hurt.

Dashes Here and There.

In these demoralizing times how long will it be before a photograph is detected in uttering forged notes?—*Cincinnati Saturday Night*.

Japan began to use the electric telegraph in 1869. It has now 125 stations, with 5,000 miles of wire. More than 1,000 miles of wire will soon be added to the telegraphic system of the country.

Considering the number of messages sent, and the fearful and wonderful penmanship in which many of them are disguised by the sender, it is surprising that mistakes are so rare. The errors of the Eastern Telegraph Company of England during the last two years, as shown by a report just published, amounted to 1615 words, 428 of which were almost identical in their telegraphic symbols. In three months, 561 repetitions took place, involving the transmission of 11,684 words, representing in money value £3,840. Some of the mistakes had to be traced through India, or to Singapore, China, Java, Australia, and Japan.

The Omaha Western Union office was removed Sunday, June 16th, into its new building, corner Farnam and Fifteenth Streets, and is now the most handsome and convenient telegraph office which Omaha has ever possessed. On the first floor are the receiving and delivery rooms and manager F. B. Knight's office, the latter being a partitioned space immediately in front of one of the large windows. The operating room is on the next floor above, and contains nine quartette tables. The switchboard has accommodation for sixty wires. The battery rooms contain between 1,200 and 1,300 cups of Calland battery.

LIGHTNING seems to be even more than usually destructive to life and property thus far this summer. There have recently been several people killed by it in Canada, and from a day of pleasure and rejoicing the fourth of July at Pittsburgh was turned into one of disaster and sorrow by the killing and wounding of a party of picnickers during a thunderstorm. Seven persons were killed, and about a dozen wounded, many of them seriously, one, a clergyman, being badly hurt on the head, is since out of his mind. Although conscious, this gentleman feels no pain, laughing continually. He recognizes no one.

Since his invention of the megaphone, Mr. Edison receives about a hundred letters a day from deaf persons. "There was a poor fellow," he relates, "who rejoiced me more the other day at my discov-

ery than I was ever before or ever expect to be. He came in modestly and asked me to show him one. He was an old man and very, very deaf, so that I had to shout with all my lungs to make him hear. I took one down and put it to his ear. Then I played the organ over there. You ought to have seen the poor old man's eyes sparkle," continued the professor. "He said, 'God be praised! That is the first time in twenty years I have heard the sound of music.' It made me feel good."

PERSONALS.

Miss Sara I. Cheney, operator at Manville, R. I., has taken the Narragansett Pier, R. I., summer office for the season. Mr. A. M. Foley will officiate for her during her absence.

We regret to learn that P. A. Rowe, formerly of Peoria, Ill., but latterly manager of the Elko, Nev., W. U. office, has absconded a defaulter. He was short in his accounts about \$150, which, however, his bondsmen have made good to the Company. Mr. Ed. B. Beecher has been appointed manager in his place, with "Arty" Brace as assistant.

Talk about fine writing! Mrs. H. M. Pepper, of the Western Union office, Springfield, Mass., has copied Bryant's "Thanatopsis" on a No. 1 blank, commencing at the word "To" on the blank, and ending an inch and a half from the bottom. The poem contains 644 words, every one of which is perfectly distinct. Can anybody beat this, and make as neat and legible a copy?

St. P. & P. A. A. CHANGES.—H. L. Dow, at Benson, has resigned. J. F. Igce, from Breckenridge, takes his place. John Simister, from Herman, going to Breckenridge, and Bob Shelly to Herman. J. H. Styles, formerly nightman at St. Paul, now works days, taking the place of W. C. Albee, recently appointed assistant train dispatcher, and working nights. Clarence Ricker has been appointed agent and operator at Manston, *vice* Ham resigned.

Yesterday afternoon, July 2, a few seconds preceding a loud peal of thunder, a sharp report like a rifle shot was heard, which was caused by lightning entering the telegraph office. The fluid passed down to the office wire on to the transmitter, and the next strongest conductor being the operator, Mr. Helms, it passed through his body, raising his feet from the floor, into which it entered. No disagreeable effects were experienced by Mr. Helms, save considerable nervousness, which, however, did not prevent him from hastily shutting out the electric intruder.—*Tallahassee Floridian*.

MCGREGOR, IOWA.—McGregor has its full quota of operators. W. S. O'Brien is manager for W. U. & N. W. Co.'s. J. H. Harburt is agent and operator C. D. & M. R. R. with "Shorty" Fretz as assistant. C. F. Spaulding is operator at C. M. & St. Paul depot. At North McGregor Dan Jaynes & Kennedy Keyes keep the hooks clear. Joe Keef, the vocalist, holds forth at C. M. & St. Paul roundhouse. Mr. Longshon is agent C. D. & M. road. Ed J. Reynolds has recently been appointed to the agency of the C. D. & M. road at Harper's Ferry, Iowa. Wm. Mooney has been transferred from Ossian, Iowa, to Postville, Iowa. W. H. Cummins, of Monona, is filling the vacancy at Ossian. M. E. Webb, formerly manager at Postville, has gone into mercantile business at Owatonna, Minn.

Major Will O. Woodson, who has for several years been the agent of the Associated Press at Memphis, died in that city July 5th, of injuries received by being run over by a street car. He had been on the Bluffs witnessing the fireworks the evening before, and returning home on Vance Street, was overtaken by a long procession of street cars going at a rapid rate down the street grade. He attempted to get on the foremost car, missed his footing, and was run over by the next car, which was crowded with passengers, and so heavily loaded that the driver could not stop it. The front wheels passed over his thighs and groin, fearfully lacerating the flesh. The hind wheels ran up on him and stopped, and it was several minutes before he could be extricated. He lingered in great agony until death relieved him of his sufferings at nine o'clock next morning. He leaves a wife and several children.

BIRTHS.

June 30th, to H. Clay Lockwood, of the auditor's office W. U. Tel. Co., N. Y., a son. First edition.

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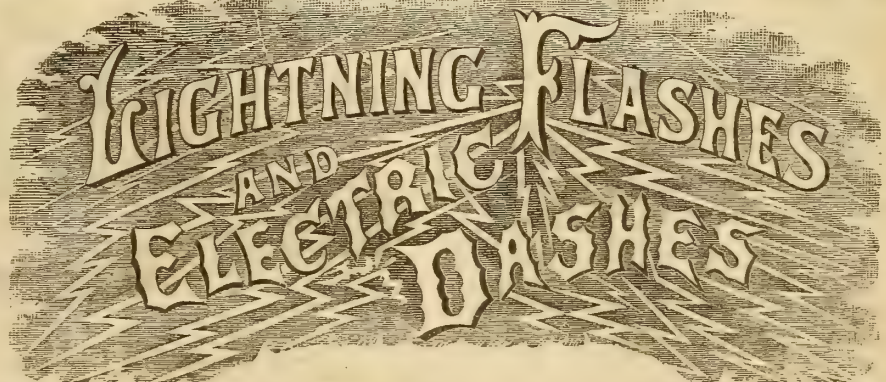
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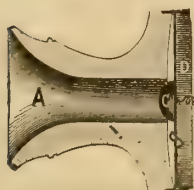
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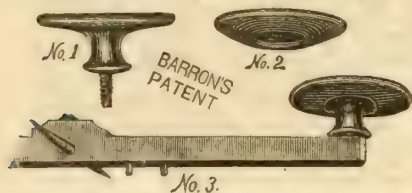
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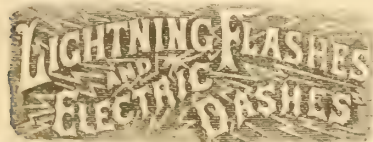
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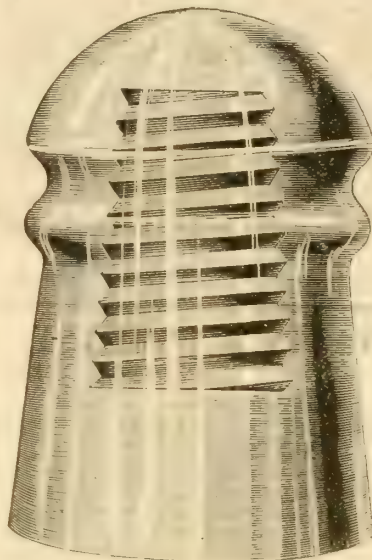
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THE EXPERIENCE AND OBSERVATIONS OF A RAILROAD TELEGRAPH OPERATOR.

By J. ALBERT CLIPPINGER,

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In the preface, Mr. Clippinger, who is already well known to our readers under his *nom de plume* of Samson, says:

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"Second, I believe, with Charles Lamb, that a laugh is worth a hundred groans in any market; and with Carlyle, that no man who has once heartily and wholly laughed, can be altogether irreclaimably bad; and also with Addison, who charmingly says: 'If we consider the frequent reliefs we receive from laughter, and how often it breaks the gloom which is apt to depress the mind, one would take care not to grow too wise for so great a pleasure of life.'

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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

August 1st, 1878.

Volume IX.

Whole No. 107.

Nobody.

If nobody's noticed you, you must be small,
If nobody's slighted you, you must be tall;
If nobody's bowed to you, you must be low,
If nobody's kissed you, you're ugly, we know.

If nobody's called you a fool to your face,
Somebody's wished for your back in his place;
If nobody's called you a "tyrant" or "scold,"
Somebody thinks you of spiritless mold.

If nobody knows of your faults but a friend,
Nobody will miss them at the world's end;
If nobody clings to your purse like a fawn,
Nobody'll run like a hound when its gone.

If nobody's eaten his bread from your store,
Nobody'll call you a miserly bore;
If nobody's slandered you—here is our pen,
Sign yourself "Nobody" quick as you can.

Werner Replies to Samson.

It was generally believed in the East that Samson—Samson, of Widow's Gulch—after his first severe attack of Wernerphobia, two years ago, went to sea on the foaming waters of the San Joaquin, and ultimately died at his post on the quarter-deck of a canal boat. Nobody cares, anyhow, even if he didn't, for we never heard of him after the dog days of 1877; but as his long silence led many to suppose that the unfortunate victim had become defunct, it is a matter of some surprise to hear the distinguished ghost of plugmism rattle his own bones at this late day. Those who have mourned his loss will doubtless be reluctant now to believe that he is not dead, but, if his professional "remains" will still insist, with all the eloquence of cheap wit and sensational display type, that he is alive, he should wake up to the fact that there is a cardinal point of etiquette to be observed among newspaper correspondents—and one pretty generally adhered to—and that is, that they are not expected to reply in their regular communications to personal attacks. That kind of literature is interminable, and it should be understood from the first that the general reading public cares nothing for Mr. So-and-so; what they want is *his letters*, his essays—in fact, they want less Samson and less Werner, and more news or more philosophy, which is what they pay for and have a right to expect. There are two or three volunteer critics, however, in our profession who write only *after me*; that is, I am expected to discover and dilate upon the subject, and after this has been printed, the noisy second fiddlers, being thus supplied with a rather extensive groundwork, and a live subject, undertake to comment thereon. As I do not write a great deal, the light of these literary men is frequently obscured under the traditional bushel basket, but, somehow, they manage to make their supplements to my essays serve as corks and buoys to sustain them on the surface until the appearance of the next original article gives them more food for thought. This, of course, leads to personal notoriety for the critics, which is probably what they seek, but I suggest that by occasionally digging up an independent, even if old, subject of their own, they can make more lasting reputations than by confining themselves to the humble occupation of cobbling at my efforts.

It is not the pleasantest occupation in the world to be compelled to explain your old studies to those who have failed to grasp the leading ideas, but, since the necessity has arisen, I will do it very cheerfully for the benefit of Samson, although it will be tiresome reading for seven-eighths of the profession who have already appreciated the points. My *Study in Natural History—the Plug*, which seems to have goaded Samson to desperation, and been the unwitting cause of an epidemic of Werner-

phobia in the Sierra Nevadas, was an innocent attempt to solve a deep professional mystery, and to prove the genealogical descent of a plug, from the Adam of plugmism down to our modern race of Chicago "traffic chiefs." At first the question presented itself to me as a problem to find a real live confessed plug, but, since my letters have poked the animals up, I have seen my error, and it now appears to me to be a race among the lower classes of that delectable horde for who shall be the leading one—the Dean, as it were, of the great cousinhood of American plugs. I have no objection to permitting Samson to wear the distinction if he thinks the cap fits him; but, since there are probably many worthy men in the profession who may consider themselves slighted by Samson's construction of my remarks, I will ask permission to supplement his collection from my writings by an additional paragraph or two from the same source. The following is from my "Review of Lightning Flashes."

"There seems to be a gross and very unjust misapprehension of the term (plug), the tendency being to class all operators who are not in perpetual 'trim' under that generic and obnoxious title. * * * The term cannot justly be applied to that bright array of learners who will some day be the great lights of our craft; nor to those whose duties do not keep them in continual telegraphic practice * * * nor to any man who does a necessary amount of breaking in preference to that amount of reckless guesswork. * * * The term applies properly only to the 'Jonahs' of our own or any other profession—blundering unlucky wights who were born Jonahs, continue to be Jonahs in whatever enterprise they may embark, and are destined ultimately to be thrown overboard by their indignant shipmates, like the original Jonah. Jonah is always in a storm. It may be either his misfortune or his fault, or both—this is no occasion to argue that point—but certain it is that whatever vessel Jonah takes passage in is buffeted and tossed by the mad waves until the able seamen heave him overboard."

Again, in a letter to THE OPERATOR nearly two years ago, I explained:

"Against those who have grown gray in the service—be they deft of finger or not—I have never uttered an unkind word. Their honorable record is their glory, and an old man staggering under the weight of years in the trench where, as a young brave, he did all his valiant service, deserves better than to be left to die there. * * * No forethought or prudence can arrest our natural decay and loss of vigor; therefore we make no fun at its expense. But we can weed out the stubble, and when we carelessly allow the weeds to grow, our course will be against ourselves."

Whatever of contempt was contained in my hastily written communications has been applied only to this one class, the stubble. I cannot discuss my reasons as openly as I might, for, from the peculiar position in which we are placed, and the espionage exercised over us, there is much of our reasoning that must necessarily be esoteric; and much must be inferred which it were charity to whisper to Samson in so much plain English. I can say, however, that I was railing only at the class of men who by slovenly and cheap work have dragged operators' salaries down to where they are to-day, and others who, in manufacturing periodically this kind of "operator," are bringing our monthly stipend lower still. My denunciations were directed only against the tramp, the sloven and the indolent of our profession, I scolded only at the savages of the telegraphic world, the *sans culottes*, the bob-tail and rag-tag of the business-men to whom loading up a gravel train is more familiar than receiving messages; men who possibly never handled anything but a wheelbarrow at the gas works until such men as Samson, either for a trifle of money, or from a morbid sympathy, encouraged them to "learn the business." It is downright nonsense for operators to think that this superintendent or that manager reduces salaries merely because the whim seizes him; it is rank idiocy to write about "grinding monopolies" squeezing out our substance; *it is all our own fault*, and not theirs. They do it, and very wisely, too, because the state of the market for our own peculiar kind of labor (which is ruled, just like any other commodity, by the inexorable law of supply and demand) warrants them in doing it. They would be false to their own interests, they would be false to their trust, if, when two workmen run after one vacancy, they did not offer less pay; we will be false to our own interests, if, when two employers run after one workman, we do not demand more pay. The possibility of the latter contingency is

not yet beyond our reach, but it will only come after we have sat down upon Samson and others who publicly advertise themselves as the apologists and champions of these detestable parasites of our profession. Of course Samson will become immensely popular among a certain class. They will write him public letters of thanks, and leading California plugs will point him out to their juniors, saying, "That is he; that is his attitude as he wrote his immortal Plea for College Professors." For myself, I am content to be classed among the Tories of our profession, though, with the single exception of the sort of men enumerated above, I am a telegraphic eudæmonist, and desire chiefly the elevation and rededication of the profession to our sacred rights. Once more I will presume, before I close, to add to Samson's collection of extracts from my own modest productions. The following was written in THE OPERATOR a year or two ago, addressed to Samson, and I ask him now to study the lessons more closely that he may see, as others do, the folly of teaching and encouraging the teaching of strangers: "Samson should reflect on his patronymic of old, who, in confiding his secret to a Philistine, was shorn of his power; and the blind and desolate old man in straining at the pillars pulled down upon friend and foe alike the ruins of their shelter."

Samson says I have plugmania. Well, may be I have. If to contemplate with sorrow the numerous "colleges" now in full blast, their graduates issuing forth to flood the profession with "talent," if to dread the results, which to our prospects will be as deadly as nightshade, is to have plugmania, then Samson has made a correct diagnosis of my case. Yes, I have plugmania. When I see "talent" so plenty that economical officials deem it safe to turn another screw or two on the salaries, I feel my attacks coming on. When I hear the answering wail of a half-famishing mother as she laments her bitter fortune, I have a fresh attack of plugmania. When I hear of "sliding scales" and "grades," and "adjustments" of salaries, and see the youthful cheeks of the victims flush afresh with deep-set consumption, I suffer uncontrollable fits of plugmania. As a result of this disease I am insane enough to consider it our duty to resist by every means consistent with our self-respect and the legal rights of others the wholesale manufacture of plugs; and, if to devote a warm, impulsive nature, my heart and soul, and my little fortunes, such as they are, to that end, will be considered by Samson as evidences of plugmania, then let Samson make no attempt to cure me. I have wild dreams during these attacks. I see storms sweeping men in every direction, but, in the midst of all, I see a small but compact party grimly standing shoulder to shoulder, and bearing aloft the motto, "Less Students." They are plugmaniacs, but in the midst of all the desolation I see them prove the towering rock against which the storm-waves of oppression reel and roar, grind and thunder, and "swing their white wrath in vain."

Of the talented Samson personally—having deemed it one of my highest honors to be his neighbor between the covers of Mr. Johnston's publications—I am sorry to speak deprecatingly. But 'tis ever thus, friend Samson. "The world," as Emerson says, "is an echo which returns to each of us what we say," and I only hope that when his turn comes he may say of me nothing less charitable than I now say in all sincerity to him: Here are regrets for your failings, here is hope for your reclamation; here is honor for your great ability, and here are tears for your unwitting efforts to lower our profession.

WERNER.

Telegraph Line Repairing.

J. A. CLIPPINGER IN "SAM JOHNSON."

Telegraph line repairing is one of the most important branches of the telegraphic service. The amount of business that can be transmitted over a wire depends upon its insulation. Upon the line repairer devolves the duty of keeping the line properly insulated, and free from breaks, crosses, and other impediments to a "strong circuit."

The line repairer must be a man who is impervious to the weather—rain or snow, heat or cold. Storms and floods, and snow-slides and land-slides are his particular benefactors. They pull down that he may build up. They confuse the wires that he may unravel them. He must undertake this at once. He cannot wait until the storm subsides. He must go out into the drenching, pelting rain, the blinding snow and the pinching cold.

Andrew McFinn was one of the oldest and best telegraph line repairers in California. He had seen

a great deal of varied and hard service. He was one of the pioneers who stretched the first line across the western plains, over the Rocky Mountains, through deserts, over the "bold Sierras," and down into the valley of the Sacramento, and on to the Golden City of the Pacific. He joined the telegraphic expedition to Alaska and Behring's Strait. Getting separated from their supply ship, they were obliged to travel inland by dog sledges, to procure food. And such food—dried seal and seal oil. Andrew McFinn had experienced all these privations and more, and yet he was in the prime of life. But California had in reserve for him an adventure that surpassed all his previous ones, at least in its propitious outcome.

In many places in the mountains in California the telegraph line is stretched from tree to tree, and across deep, narrow canons and gulches. In the mountain wilds of Calaveras County, where the bear and the California lion roam at will, and the sound of human footsteps is seldom heard, is a narrow ravine which bears the name of Musquito Gulch. Its rocky and almost perpendicular sides reach upward until they seem to touch the sky, and nearly shut out the light of day from the narrow stream of clear, cold water that rushes along at the bottom. Musquito Gulch is several miles in length. In building a telegraph line in this mountainous country, it was found expedient to cross Musquito Gulch near its centre. This was a most difficult undertaking, as Andrew McFinn can truthfully testify. Having attached the wire securely to the limb of a tree on one side of the gulch, he trailed it along its summit for half a mile before he could find a place where he dared attempt to descend to the bottom. Once at the bottom, his trouble had but fairly begun. To reach the summit on the opposite side from which he started, from the base of the gulch, was a difficult and exceedingly dangerous undertaking. Sometimes a rock gave way from under his feet, and he started to descend, but saved himself from destruction by grabbing a bush or rock. Sometimes loosened rocks and dirt tumbled down upon him from overhead, and cut and bruised and almost blinded him, while it kept him, as it were, suspended above the grave. All this time he retained possession of the wire, which was a heavy weight to carry, and often very nearly severed his hold on the "ragged edge" of life to which he clung tenaciously. He finally reached the top "more dead than alive," and after a "breathing spell," carried the wire back along the uneven summit to a place opposite the tree to which he had attached it, ascended a tree and fastened the wire to a limb that extended out over the gulch.

One of the most prolific sources of income to telegraph companies in California arises from the stock gambling mania. Mining stock telegrams are given the preference over all other commercial business. Sometimes a single message is burdened with the weight of a million dollars. Fortunes are made and lost so quickly in speculations in mining stocks, that the millionaire of to-day may be the beggar of tomorrow, and vice versa. But it is safe to say that ninety-nine lose where one gains. Stock gamblers—those who control the markets—are a shrewd, unscrupulous, mystery-plotting, excitable, speculating class. They will "move heaven and earth" to "bull" or "bear" the market, and engage in every imaginable species of manipulation which is not downright, open dishonesty, to deceive the public and forward their own schemes. One of the wealthiest men in California at the present day was once a telegraph operator, and made his "strike" by the shrewd use of his telegraphic knowledge.

There was a mining case being tried in Virginia City, Nevada, wherein the title to a mine valued at fifty million dollars was in dispute. Now, the future market value in San Francisco of the stock of the mine in litigation depended altogether upon which of the claimants won the suit. If the prosecution won, the stock would fall; if the defendant won, it would rise. If one of the "mining sharps" in San Francisco could obtain reliable information of the final decision of the suit in Virginia City a few hours in advance of any others, there would be "millions in it." Abe Parker—that is not his proper name—the telegraph operator referred to, agreed to furnish one of the leading stock brokers of San Francisco the desired information for a share in the spoils. Abe's plan was satisfactory and his proposition accepted. Abe supplied himself with a telegraph instrument, some office wire and blank paper, dressed himself like a "prospector," and started for the mountains. He located in a lonely, out-of-the-way place about midway between Virginia City and San Francisco, in a deserted sheep-herder's cabin in near proximity to the telegraph line. At that time there was but one line between the two

cities. Abe ran a fine wire down on two sides of a telegraph pole and into his cabin, arranged his ground wire, set up his instrument, and was ready for business. His idea was to watch the development of the trial by the dispatches that were constantly passing over the wire about it, and when it finally culminated, to attach his ground wire—which would not be felt, being about equi-distant between the two cities—receive the messages from Virginia City that would be sent to parties in San Francisco announcing the decision of the trial, as if he were the San Francisco operator. Then he would turn about and send the important information to his broker, successfully withholding it from the others. This Abe accomplished, and was rewarded for his shrewdness—you may call it rascality if you like—by the handsome little fortune of two hundred thousand dollars in gold coin.

(TO BE CONCLUDED NEXT ISSUE.)

The Proposed Protective Organization.

The idea of a Protective Union for telegraphers meets with my earnest approval, but not to be carried out in the form that is generally understood by the majority of operators. There should be nothing aggressive in such an organization. On the contrary, I think that the co-operation of the Western Union Company, as well as that of the various railroad companies could be secured, provided proper advances were made to bring about such a consummation. It appears to me that all we need is a restriction upon the "manufacture" of operators, an equitable classification of talent, and an understanding with employers that such classification will be recognized by them. My plan would be substantially this: The president of the organization to be elected by a majority vote; his qualifications to be ten years active service as an operator, and in present active service, and not less than thirty years of age. The president to appoint a secretary, a treasurer, and one member of an advisory board. The majority to elect at the same time that the president is elected, four members of an advisory board, the advisory board together with the President, Secretary, and Treasurer forming a council of eight members for the government of the organization under such restrictions as shall be laid down in the Constitution; and the Council to hold office for two years.

With regard to the classification I would suggest that there be four degrees; the first to be known as entered apprentices, and the others numbered first, second and third. Any new member joining the organization must do so as an entered apprentice, and, no matter what his qualifications may be, must remain an entered apprentice one year. Degrees to be conferred by the Council, qualifications being as follows: First degree—ability to write a legible hand, to be able to form the Morse characters plainly, and to be able to receive fairly. Second degree—a knowledge of English grammar, the geography of the United States and Canada; punctuation, spelling, and capitalization. Third degree—Electricity, instruments, wires and general information necessary to an accomplished telegrapher. No degree to be "skipped," but each candidate as a requisite to attaining to a higher degree to be able to show by his certificate that he is an active holder in good standing of the degree immediately below. Candidates must hold each degree at least one year.

The question of salary might be left to the employers, only asking them to stipulate that they will be guided by the certificate of an applicant, and pay accordingly at such increase as they may set, as the candidate advances. I have briefly stated my plan, leaving details to be considered when the proper time comes, and I have confidence that such an organization would meet with the approval, if not co-operation, of employers. Emulation would be stimulated, and the employing company would certainly be the gainer in thus being able to secure better talent at a fixed compensation.

CERVANTES.

I have spoken to a good many, and they are as a rule strongly in favor of an organization of some kind. I see all the operators are not subscribers of THE OPERATOR. It is hard to remedy this, as plenty of us are not making but very little above our expenses, and cannot at these wages. If there was a paper sent for signatures I think you would get the majority of us on this line. One trouble with us is we are receiving such low wages that if a student offers us two, three, or six dollars a month, we are actually about forced from our necessities to accept. The organization should do its

best to put a stop to operators' wives learning students for nearly nothing. There is considerable of this done on this line, and at as low a figure as four dollars a month. I am in favor of the one dollar initiation fee, and fifty cents a month for expenses. Send on your subscription list to the operators of the Burlington, Cedar Rapids, and Northern R'y, and you will find us to a man ready to "pull for the shore."

ASPIRING YOUTH.

I am in favor of shutting off learning students. When I started in the business about twelve years ago, I made up my mind to learn no students. I kept this resolution for about two years, when I found that every railroad office had two or three students. I then made up my mind I would go at it too, charging from forty to fifty dollars each. I have hardly been without a student since. I have long wished that there could be a stop put to learning so many students. Telegraphing is governed by the supply and demand. If we can shut off the supply, we can then get the demand for our services, and the only way to do this is to get the railroad operators into it, for you know that it is for the stations that they turn out the students. I would oppose strikes in every shape, but if we can form an order and get all the operators to go into it, I would vote in favor of protection. The letter in THE OPERATOR of July last, signed Knights of the Key, also one dated May 18, signed Key, I can indorse.

SLY BOOTS.

The manager of the Western Union office in a New England city, writes: I have had sent me by friends several copies of your wide-awake paper, and wish you the best of success. I inclose herewith my subscription. As regards the "protective union," so strongly advocated, I can say it is heartily indorsed by the operators located in this city, beside the operators at — and — (adjoining towns), I think can be relied upon. I shall see Mr. — of Boston in a few days, and undoubtedly through him you will learn what progress has been made in this section. I do not believe in strikes as a means of redress, if any other peaceable means can be substituted to bring about equitable treatment. As you maintain that that is not the real object of the "union," but only to be resorted to as a last resort, you have my sympathy and cordial co-operation.

I add my vote to the others, and think that such an organization will benefit not only the operator but the employer as well. At present, the operator in looking to the future, sees nothing before him but the inevitable sliding down to penury, and he cares nothing whatever for his employer's interest; the latter in turn has about the same feeling for the operator. Now, if we can persuade those who need our services that we have some object in view, and realize a sense of duty in taking some interest in the business committed to us, they may begin to appreciate our services hereafter. At present, an operator does not seem to care to handle more than two hundred messages a day, while formerly he took pleasure in working off twice as many. FESTUS.

The Philadelphia division of the Pennsylvania railroad, in which upward of one hundred operators are employed, is in favor of a protective union. We have already interviewed the majority of the operators on the division, and up to the present date have not met with a particle of opposition from a single operator, so I think you may safely count this division solid to the backbone. An operator in your number of July last, writing under the signature of "Diogenes" asserts that the T. P. and W. R. R. are paying the lowest salaries to operators in the United States, we beg permission to contradict him, this division of the P. R. R. paying but \$29 a month to night operators as well as to some of their day men.

Please record my vote in the affirmative on that now most important question to operators, "Shall we have a protective association?" It is just what we need. I have taught my last "student," being convinced that I damaged the fraternity in general more than I benefited myself by teaching plugs. Too many of us think: "well, I am going to take students, and get my little twenty-five or thirty dollars extra now, and let the future take care of itself," but when we are cut down to forty-five, thirty-five, and even twenty-five dollars a month, which we will soon be if we don't look out, we will see where we fooled ourselves.

RELAY.

I feel assured that were a Union formed and fostered for three or four years which would strive to improve operators morally and intellectually, we

would have no need to assume the aggressive or protective as regarded our employers; but if we were *compelled* to protect ourselves from men whose ambition and avarice made them tyrants we would then be in a condition to do so successfully, or eternally ruin them. We want power, pecuniary and intellectual. We want unity and discipline.

SOUTHERNER.

The operators in this part of Kentucky are becoming very enthusiastic upon the subject of a protective organization. I have in circulation among them a manuscript getting their votes upon the subject which I will forward to you when complete. All that is wanted is some one to rise up in our midst who has had past experience in such matters, and assume the lead, and I will be responsible for the assertion that Western Kentucky will be well represented at the meeting, and will try to a man to stand by the organization.

WESTERN KENTUCKY.

If those who live in the east wish to know the feeling of the west, let them read it here, that the west is almost *unanimous in their demand for a union*, and that if one is not started soon and an opportunity given them to join we will have one of our own, and then—

OMAHA, Neb.

Size of Noted Buildings, Towers, Etc.

Gentlemen Operator, did you ever think, as you overturned a chair or two, and caused general confusion in your office, by trying to stretch your legs to their full length while sitting down, that it was a pity that some of the surplus length, breadth, and height of the often half, sometimes entirely useless, but wholly wonderful buildings of the world, had not been reserved for telegraph offices?

Lady Operator, on some occasion, when you have, by some necessary movement, upset one or two cherished plants, knocked the books from your shelf, and seen your work-basket turn itself bottom upward, just because it came in contact with the back of your hand, and your blanks and envelopes have shown a tendency to float rapidly, if not gracefully, downward, have you ever mused on the unfitness of things, and wished you could confiscate some of the spare space in the world-renowned structures we read about, and which some of us may have seen?

As my mind is now on this subject, and I have in some spare half hour jotted down the dimensions of some of the aforesaid wonderful buildings, I will give you their size, hoping you may not be wholly uninterested.

St. Paul's Cathedral, London, measures 510 feet from east to west, and from north to south 282 feet. Its circumference is 2,293 feet, lacking only 343 feet of being half a mile. From its foundation to the end of the cross at the top it is 404 feet. The length of St. Peter's, Rome, is 613½ feet. Its height to the top of the cross with which it is surmounted is 448 feet. The diameter of its great dome is 196½ feet. The tower of Strasburg Cathedral is 461 feet high, making it 13 feet higher than the cross on St. Peter's. The Colosseum of Vespasian covers six acres. It is 157 feet high. Its diameter, including the thickness of its walls, is 554 feet.

The Capitol of the United States covers 3½ acres. Its length is 752 feet. Its height is 350 feet. Its depth is 342 feet. The base of the Tower of Babel is 2,000 feet in circumference. Its height is 500 feet. It is surmounted by a statue of Belus, which is 60 feet high, making its extreme height some less than 600 feet. The height of the Pyramid of Cheops is 480 feet. The circumference of its base is 2,292 feet. The height of the celebrated pillar near Delhi, India, called Kiolto Minar, is 242 feet. The diameter of its base is some less than 50 feet. When it was complete, its height was 300 feet, and consisted of seven stories. Nearly all of these remain.

I trust Longfellow will pardon me if I modernize one of the stanzas of his most excellent poem, "The Arsenal at Springfield."

"Were half the stamps that helped to raise these buildings,

Were half the room that's wasted in these towers,
Given to relieve our little dens from closeness,
There'd ne'er be written such a sketch as ours."

L. A. CHURCHILL.

Edison, the phonograph man, lives at Menlo Park, N. J. We are going to answer this question as often as it comes if it breaks both legs. — *Detroit Free Press*.

A Blonde Changed to a Brunette by Lightning.

Seldom has the electric stuff done a more curious thing than it did on yesterday morning at 3 o'clock, at the residence of H. I. Guild. Mr. Guild and his wife were occupying a bedroom on the second floor, and Lottie, a bright-faced child of four years of age, with golden curls, occupied a double cot on the first floor, in company with her grandmother, Mrs. J. J. Ames, aged about fifty years. This cot was placed under the opening of the main flue of the chimney.

The first recollection that Mr. Guild has of the situation was when he was on the floor of his bedroom with his wife clinging to him and screaming. He turned on the light, and at first glance discovered that the patches of plastering in the ceiling of his own room and in the rooms adjoining were hanging over his head, and the lathing protruding. A closer inspection revealed the fact that the shingles in the vicinity of the chimney were torn up. He then concluded that lightning had done the work. The next thought was of the grandmother and his daughter Lottie below. Upon arriving in their room, the little innocent, her face, head of curls, and hands black with the soot of the flue, commenced to clap her hands at the appearance of the grandmother, who was also blackened with soot. Upon examination, Mrs. Ames was found to be in an insensible condition, and a doctor was summoned. He applied remedies to the lady which caused her to recover consciousness, but found her to be in a very weak, nervous and precarious condition. The child told the story of how the fire came down the chimney and knocked herself and "grandma" from the cot to the floor. The child was then subjected to a severe bath, and then was discovered the most remarkable feature of the whole affair. The profusion of curls, which were of unusual length, reaching almost to the child's waist, and which had been of a bright golden hue, were of a blue-black, or inky color from the roots to the tip. At first it was supposed that this was caused by saturation from the soot, and the hair was subjected to a wash with a strong solution of ammonia. This had no effect in changing the color. A closer examination revealed the still further singular fact that the scalp of the head was also colored, indelibly it seemed, the same as the hair. This was given a thorough bath, but without effect. Up to 6 o'clock on yesterday afternoon, after a lapse of fifteen hours, and after repeated washings with ammonia and other solutions, every hair remained the same shade as when the change was first noticed, and so with the scalp of the head.

The child made no complaint, except of a feeling which was understood to be, as near as she could tell it, a headache.

The physician stated that the remarkable change might have been the result of electricity, but beyond this he did not venture an explanation. He had heard of one or two instances like it. The vitality of the hair did not seem to be destroyed, for it was still as soft as silken skeins. The little cherub seemed as lively as a cricket, and rather pleased than otherwise with the sudden transformation from a blonde to a brunette without cost. — *Chicago Tribune*.

The New Washington Western Union Office.

The new office is situated on the corner of Fifteenth and F Streets. The location is considered very good, it being in the immediate vicinity of the Treasury Department and the prominent banking houses of the city. The first floor is used for the receiving and delivery departments; the fifth floor for the operating department, with clerk's room adjoining; and the sixth floor for battery purposes. The operating room is fifty-seven feet long by twenty-two feet wide. It contains thirteen quarte tables, six sets repeaters, two sets duplex, one quadruplex repeater, one duplex printer, and a switchboard to accommodate one hundred and eight wires. It is a very convenient office, and all are delighted with the change. And yet sorrow was depicted on the countenance of some at leaving the old office.

There were many happy remembrances connected with the old ranche that made it dear to us. Hoop-em-up Hahn had grown gray in it. He spoke triumphantly of the number of men he had "salted" in the days gone by, in that region known as the "soon south." Harvey Cutter said the only thing he regretted was, that in the new office he would not be allowed to wind his legs around chairs and table-legs—his favorite position. McCarty was observed sitting silently in one corner with his spectacles removed, and the tears chasing each other over the bridge of his pale proboscis. As Parker remov-

ed the last spittoon from the room, it was noticed that he was winking like a man who had had a dose of red pepper, and his under-jaw was vibrating equal to the armature of a telephone. It so affected our automatic interrogation point (young Bender), that he actually stopped asking questions for five minutes. The transfer was soon made; all were soon seated in their new quarters, and business resumed.

Geo. L. D. Divery, after an absence of more than six months, on account of the illness of his mother, has returned to work. E. W. Thompson has gone to the "Tarheel" State for a month. Jno Burruss is off for a month, sojourning at Petersburg, Va., his native place. Dr. Nutt left July 15th, for Niagara Falls, Canada, and a tour through the Eastern States.

CULLY.

Trying to Read the Phonograph Records.

Thomas A. Edison, the inventor, recently gave an account of some attempts which have been made to read the phonograph records. It had been a question of serious consideration with him, Mr. Edison said, whether the indentations in the tin foil could be read with the eye. Want of time had kept him from making extensive experiments, but he was of the opinion that careful study would enable experts to decipher the phonetic characters. Profs. Fleming Jenkin and M. Ewing, of the University of Glasgow, Scotland, had spent much time, he said, in examining the phonograph records, and had been partially successful in their attempts to read them. The method employed by the professors was to repeat each of the vowel and consonant sounds a number of times, and then examine the record to determine if the indentations had any regular or characteristic shapes which would serve to identify the sounds. The result showed that the record of any single sound repeated was very irregular—one series of indentations differing widely from another. It was claimed, however, that despite this irregularity the record of any one sound could be distinguished from that of another sound.

Mr. Edison said that he had repeated some of the experiments made by Profs. Jenkin and Ewing. Knowing beforehand what sounds had produced the records, he said he could tell the sounds by the indentations, and also count the number of times a sound had been repeated. He found it impossible, however, to recognize similar sounds which had been repeated to the phonograph by another person. The shapes of the indentations were found by experiment to differ for the same sound, according to the speed with which the cylinder of the phonograph was turned, the force with which the sound was uttered, and the distance of the mouth from the diaphragm. Even by placing his hand against his cheek while repeating the sound, Mr. Edison said, he could change the shape of the phonetic characters. Between the records of vowel sounds very little difference could be detected. For some vowels the indentations were deeper at one end than at the other—giving to the characters the shape of eggs, pears, and Indian clubs. This is usually the case with the vowel E. The deepest indentations are made by consonant sounds, on account of the explosive force with which these sounds are uttered. Words beginning with P can be recognized more easily than any others, by the deep indentations which begin the records. One difficulty in recognizing records of words is found in the length of these records.

It might be well to draw the attention of the Electrical Society of the Ohio Valley, whose members have been engaged in so lively a discussion on the subject of an earth connection for lightning rods, to the fact recorded in the London *Telegraphic Journal*, that a French agricultural paper announces the discovery that bundles of straw bound on broom-handles and stuck upright over the roof will effectively protect a house from lightning. The first trials of this apparatus were recently made at Tarbes (Hautes Pyrenées) by some intelligent agriculturists, and the results were so satisfactory that soon afterward eighteen communes of the Tarbes district decorated their houses with these "stuck-up" but at the same time unostentatious and ingenious lightning protectors, and it is reported that there have been no accidents from lightning since. By what experimental process the intelligent agriculturists came to their conclusion is not stated; nor can we learn what the idea was which inspired the plan, although it appears to have been the old proverb about a hair of the dog which bit you, for it has long been known that witches ride the storm on broomsticks.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

W. J. JOHNSTON, - - - Publisher.

August 1st, 1878.

READ the advertisement of the new book "Sam Johnson" on page two.

WE are indebted to the Washington Telegraphers' Association for a complimentary ticket to their second annual moonlight excursion, July 23d.

WE publish to-day the beginning of "The Gospel Trap, a Story of the Phonograph," by Mr. J. Munro, of London. We shall be pleased to hear from Mr. Munro again.

TELEPHONIC sounds can be relayed by the application of a small Hughes' microphone to the diaphragm of the telephone, the microphone being in circuit with the line over which the sound is required to be relayed.

MESSRS. PHILLIPS AND CHRISTIE, of the Associated Press, who have been spending a brief vacation at Cape May, N. J., have returned to duty reinvigorated and ready for more labor. They say they enjoyed themselves immensely.

THOSE who have written us on the subject of the proposed protective organization, and failed to find their communications in print, will understand that the omission is due to the large numbers of similar letters received, and the utter impossibility of publishing them all.

THE order for dismissal of the suit of Edison against the Western Union Telegraph Company, on the ground of the non-residence of the defendants, was rescinded by Justice MacArthur, in the Equity Court at Washington, July 20. This will place the suit, which is to test the ownership of the patent for the quadruplex telegraph instrument, on the calendar, to be tried on its merits.

THE annual meeting of the stockholders of the Vermont and Boston Telegraph Company was held at White River Junction, Vt., July 24. The following persons were elected officers: Directors—Norvin Green, C. Livingston, W. S. Hunt, Oliver H. Palmer, John C. Hinchman, Charles F. Wood, George W. Gates, Roswell H. Rochester, and H. C. Sherman. President, Norvin Green; Secretary and Treasurer, R. H. Rochester.

MR. TRACY BARNES, of the C. and N. W. R'y Clinton, Iowa, who so energetically looks after the interests of THE OPERATOR in that State, has returned to his old position, "braced up bran new" after a trip for rest and recreation extending over a period of four months. His travels were mostly in the South and Southwest, and he says he is under obligations to the fraternity through the south, and especially those in St. Louis and Texas for kindness.

Objections to a Protective Association Considered.

It was not by any means supposed that every telegrapher would favor a protective organization. We looked for opposition from not a few; for, no matter how excellent a proposition may be, there are always those who dread change, fearing that it may leave them no better, and just possibly worse off than before. They look upon the promoter of such a scheme either as a kind of mild lunatic or as a bad, wicked man, with some selfish object in view; and lose no time in denouncing him and it. We saw this in the many as yet unsuccessful attempts that have been made to get rid of the space letters in the Morse alphabet. Dozens of different men have tried it, but, although a reform that should, and we believe eventually will, be inaugurated, the proposition meets with no favor from those interested.

In regard to a protective association for telegraphers, however, this is not the case. So far as heard from there does not appear to be as many as one in a thousand—possibly not one in every two thousand—opposed to it. In fact, of all the letters we have received on the subject, but three oppose it. One is a manager, who seems only to object to a strike; the others—"Cupid," whose letter was published in a recent issue, and one N. H. Foster, of Covington, Ind., a relative of the local superintendent—are mere boys, and probably don't know their own minds in the matter. At all events, should an organization be perfected, and an increase of salary ultimately obtained, we do not think that these youths would have any further objections to offer. The official organ opposes it, but this is natural. Tyrants always oppose, and bitterly, too, the efforts of their subjects toward freedom.

Though lack of space prevented publishing one-tenth of the communications received favoring the organization, we have conscientiously printed everything so far to hand offering any objection to it. Here is a letter from the manager above referred to, which we give complete, omitting only name and date:

After an experience of twenty-two years as an operator, I am strongly opposed to any organization which in any way could be construed into an organization for a strike. I do not think any good can result from such an organization. I would advise all operators to be careful in their selection of students; the less of them the better; and to be more manly and self-reliant; let whisky alone, and they will not need any protective societies. I have had working nights in this office some ten operators in as many years, and out of that number only three have proved to be reliable men—men who could be trusted, and be on hand when wanted—men who were not afraid of hard work—men who were thoroughly familiar with the construction and working of instruments, and who could at any time know that all lines leading into or out of their office were in working order; and if there was any trouble, could find it, and put everything in working order again. Such men will always find employment at remunerative wages without strikes or societies.

There is no argument here against such an organization as is proposed. The letter is rather an argument in favor of one. He says he doesn't want a strike. Neither do we. There is no intention of striking. He says the fewer students taught, and the less whisky drank, the better, and complains of the inefficiency of many operators. So do we, precisely. We want to stop the teaching of students, and to purify the profession of

the drunken, incompetent tramp operators, raising it to the position it ought to occupy. This cannot be done except by organization, and for this very purpose is it proposed to join hands. So long as matters remain as they are, just so long will the evils complained of continue. But a well-organized, properly officered association would be able in a very short time to make a wonderful change for the better.

How does this gentleman imagine that operators will take an interest in their business, or strive to perfect themselves in the higher branches of the telegraphic art, when their salaries are constantly being cut down, and no inducement held out to them to "go up higher," or even to remain in the business? A judicious increase of salary always pays, but reductions such as the Western Union has recently made are not economical in the long run, and if the company complains that operators are not so thorough as they might be, it has itself to blame for it. Let it pay proper salaries and it will have no difficulty in retaining good talent in the profession. As it is, all the best men are dropping off just as speedily as they can get anything else to do.

The Western Union's little game of bluff, in pretending to believe, as per last issue of the *Journal of the Telegraph*, that those in favor of a protective organization "are not sufficiently numerous to do much damage," will not do. Both the company and the writer of that column of impudent verbosity know that at least 999 in every 1,000 favor such an organization, and that the business depression has nothing whatever to do with the reductions. The Western Union is making more money now than it did when times were good, and is merely taking advantage of the condition of business to reduce salaries and increase dividends, that the price of stock may go up. It has been going up lately, too, but the salaries of thousands have come down, many men have been thrown out of employment, and those retained are compelled to do about double duty. But what do the stockholders care? All they want is large dividends, no matter how many are made to suffer in consequence.

The Western Union appears to be getting frightened, and tries to soothe its employés with empty promises, because it is afraid they are going to take the matter into their own hands, and do it "damage." It is not straightforward enough to print its "practical suggestions" editorially, but orders that they be made to appear as coming from some of the readers to whom the paper is regularly mailed free. What the employés did was open and above board; but here is the champion of salary grades and sliding scales, whose article might just as well have gone in editorial, skulking into print under the *nom de plume* of Western Union Employé. If he has anything more to say on the subject in this manner, we would suggest that he be manly enough to sign his name to it.

The other objection comes on a postal card, and is as follows:

COVINGTON, IND., July 12th, 1878.

Four operators in this place denounce your damnable scheme of a strike as worthy of you and just such hair-brained fools as read your paper and books.

N. H. FOSTER,
Manager, W. U. Tel. Co.

Covington is an unimportant station on the I. B. and W. R'y, and the county seat of Fountain county. N. H.—Nearly Heavenly, or Nasty, Hate-

ful, which?—Foster, the agent and operator, as will be seen from the above postal card, is one of those egotistical young men who are ever on the alert to thrust themselves into notice, and cry "let us *bray*." Being a youth of tender years, he has only been in the business a short time. He is a relative of the superintendent of telegraphy of his division, however, and consequently a warm admirer of the company. Those who know, say that his salary, if not increased, was, at least, not reduced on the occasion of the late gradation, which shows that a superintendent is a handy thing to have in the family, and probably accounts for the N. H.—Naturally Happy, or Never Harmonious, perhaps—Foster's virtuous indignation at the thought of a strike, or anything else that would by any possibility affect him unfavorably.

We were sorry to question Mr. Neophyte Foster's veracity, but doubted there being four operators in Covington who opposed a protective organization. We therefore wrote a friend on the subject, who, in reply, says: "Do not believe there are three others in the place who denounce the scheme. Foster is simply an ass."

We thought as much ourselves. Of course, the "gentlemanly" Foster has a perfect right to his opinions, and need not join the organization if he does not feel so inclined—in fact, such "men" are not wanted in it—but he has no right to insult others because their views happen to differ from his on the subject. His gratuitous impertinence in styling the readers of *THE OPERATOR* "hair-brained fools," whatever hair-brained may mean, can be charitably overlooked in a verdant youth who shows himself to be as ignorant of good breeding as he is of what he is talking about. It happens that the readers of *THE OPERATOR*—though it may look like blowing one's horn to say so—embrace the very brightest lights in the telegraphic firmament, both in this country, in Europe, New Zealand, and Australia, and that it is more extensively read and copied than any other telegraphic paper published. It happens, too, that there is no "damnable scheme of a strike," except in the brain of such fanatics as this Foster, who appears to be too stupid or too ignorant to understand what he reads. The London *Telegraphic Journal*, whose editor has probably read as much on the subject as has our critic, thus refers to the matter:

We learn from *THE OPERATOR*, that it is proposed to form a protective association among American telegraphists. The monopoly of the Western Union Company, and the recent unpopular measures of salary gradation in that company, have helped to render such a step prudent on the part of operators. No strike or aggressive policy is at present contemplated, the organization being regarded as a safeguard for the future.

A correspondent suggests in this issue that it might be for the best interests of employer and employé to pull together, and establish a combination for the purpose of regulating the admission of learners into the business, and also grading and classifying the salaries paid to operators. It probably would be, if it could be done, and the companies acted in good faith. However, the Western Union Company does not seem to be so favorably impressed with the idea of recognizing the right of its employés to combine for their own protection, as to be likely to co-operate with them. When Wellington's secretary asked what reply he should make to Marshal Junot's proposal

of an armistice, the Iron Duke answered, grimly: "Say, 'go to the devil,' in civil French," which is about the reply the Western Union made to a delegation of operators who wanted to discuss the situation with it during the strike of 1870.

A Telegraph College at Troy.

Under the caption of "A Splendid Chance," the *Troy Times* of a recent date, contains the following seductive advertisement:

FOR A LIGHT BUSINESS.—There is none where such high salaries are paid as to telegraph operators. Good operators are always in demand, and now that an opposition to the Western Union has been started with millions of capital, the demand cannot be supplied. The powerful monopoly (Western Union) now employ over 5,600 operators. The new company will require as many more, and, in order not to be delayed on account of insufficient supply of operators, have established a telegraph school in Troy, so that for a very small sum acceptable persons, both ladies and gentlemen, will be taught the art. Open day and evening. For further information call or address

D. S. HAINES & Co., Managers
251 River Street, Troy, N. Y.

Two of the Troy operators played "greeny," and called upon Haines & Co to obtain terms, etc. The manager was not in, but one of the brothers—there are four of them—furnished the information that it would require from four to five months to learn, the cost being ten dollars the first month, seven dollars the second, and five dollars a month afterward. He also assured them, which was news to them, that operators were scarce, and that in a short time they might work up to eighty or a hundred dollars a month. This advertisement is a swindle on the face of it. If there are any foolish enough to be taken in by it, it seems to us that they deserve to lose what money they invest. We are assured by the Troy operators that every effort will be made to break up this "college," which is precisely what should be done by the telegraphers of every place in which they attempt to carry on their nefarious business. If those whose business these adventurers are ruining would only take the matter in hand, work against them, expose them among their friends and in the newspapers, we should hear less of these "splendid chances"—a splendid chance, we presume the Messrs. Haines think, to gull thoughtless young men and women out of a little money.

MR. EDISON as an invited guest accompanied Professor Henry Draper's party which went to Rawlins, Wyoming Territory, to make observations during the eclipse of the sun, July 29th. Besides a thermopile, Mr. Edison took his micro-tasimeter (minute motion measurer), for the double purpose of attempting to measure the heat of the sun's corona, which has never before been appreciable, and to endeavor to discover and measure the heat rays which, scientific men have reason to believe, exist in the outer lines of the solar spectrum. The tasimeter is so sensitive that it will measure 1-50,000, or 1-100,000 part of a degree Fahrenheit. In a dispatch from Rawlins immediately after the eclipse, it is stated that Edison's experiments with the tasimeter were quite satisfactory, while another, dated Denver, Col., says that "Edison's tasimeter failed to work satisfactorily, and he used a thermopile, which caused unsteady motions in the galvanometer." After the observations Mr. Edison started on a vacation still further West, to visit

the Yosemite Valley, San Francisco, and a portion of the Pacific Coast. This is Mr. Edison's first vacation in a long time, and he says he means to enjoy it.

WE would draw attention to the advertisement in this issue of Mr. Clippinger's new book "Sam Johnson, the Experience and Observations of a Railroad Telegraph Operator." The book, as the sub-title indicates, consists of a series of short stories or sketches—most of them actual occurrences—illustrative of the checkered life and sometimes humorous, sometimes thrilling experiences of a representative railroad telegraph operator. Some of the scenes are laid in "the States," and some in the land of the setting sun—California. "Sam Johnson" is nearly all in type, and will be ready for delivery, it is expected, about the first of September. Those desiring copies will do well to send their orders at once, which will be filled immediately the book is published. Read the advertisement carefully, and note the extremely liberal club rates that are made when one or more of the other books, or *THE OPERATOR*, are ordered in connection with the new book.

WESTERN UNION stock, the price of which has gone up steadily for several weeks, is now quoted at 92. This time last year it was selling at 67½, but nearly all the railroad and kindred stock dealt in at the Stock Exchange have advanced in price in about the same proportion. The banks, trust companies, and other corporations find it impossible to secure employment for their funds at anything like profitable rates of interest, and hence have been buyers of government bonds and other securities, which probably accounts for the increase in price.

PROF. BELL writes to the London journals to protest against the telegraph bill now pending in Parliament, which proposes to bring the telephone under the operation of the act of 1869. The practical effect would be to take from the inventor the use of his invention and make it the subject of a government monopoly. Prof. Bell very properly regards such a proceeding as "contrary to every principle of fair dealing."

MR. H. VAN HOEVENBURGH has obtained a patent for printing telegraphs, and on the same date, June 4th, two patents were issued to Mr. Elisha Gray for speaking telephones. Mr. Gray must have quite a number of patents on telephones by this time, for there is scarcely a week that he does not obtain one or two.

If operators visiting New York during their vacation will call at this office, we shall be glad to show them through the Western Union building and other places of telegraphic interest in the city, or to render any other assistance in our power. They can also have letters, etc., addressed in our care.

It is now promised that the Continental Telegraph Company will be open for business between this city and Philadelphia, about the first of September.

A NEW cable is in process of construction between Constantinople and Salonica.

The Gossip Trap—A Story of the Phonograph.

Some philosopher has told us that every word which falls from our lips is irrevocably imprinted in the silent and unseen motions of the atoms which build up the fabric of nature. If this be so, it is appalling to think of the accumulation of foolishness at present vibrating in the mass of the universe. Although every whisper, every exclamation, every speech is automatically recorded by the mechanism of matter with inflexible and pitiless rigor, we have no power to read this sealed history, or extract from it the secrets of the dead. At the day of doom, perhaps, the book will be opened before us, but not till then. If we did possess this power, what startling revelations would it yield us! How many cherished illusions would be dispelled, how many trusted facts of history would be falsified, how many heroes disgraced, how many humble men exalted, how many affections wounded and wrongs righted, how many faiths broken and ideals dethroned.

This power, however, is denied us—the atom keeps his secrets well. If we did possess it, there could hardly be such a thing as secrecy among contemporaries. Business would be impossible, and the vows of lovers uttered in the solitude of the woodland glades would be sacred no longer. This would be a lamentable state of affairs. It is true that gossip and scandal would most probably be exterminated, since every one would have to guard his tongue with jealous care. This, on the other hand, is certainly an extenuating point in favor of the gift, especially at the present time, and one is tempted to desire a lease of it, if only for the purpose of eradicating rampant scandal, and abolishing the so-called "society" journals. But it seems to me, and I speak feelingly on the matter because of my recent experiences, that it is better that we cannot resuscitate all the lost words of our lips, and call forth at will the idle scoff, the petulant cry, the flippant jest, the foolish twaddle, the vain and spiteful gossip, and all the idle talk which daily falls from us and sinks into the most fitting place for it, the limbo of oblivion. The poet Burns sighed for a faculty which would let us see ourselves as others see us; and similarly we might wish for a means by which we could hear what others say of us. But, although both endowments might help to free us from many a blunder and foolish notion, would they not be more annoying and harmful than beneficial to us? What would then become of the variety and spontaneity of character which gives a zest to life? What would become of the harmless little ideal which every one forms of himself and basks in, and which serves to render him both bright and happy? If Mrs. Brown no longer secretly felt that there was something majestic and queenly about her person, she would not be half so bright and attractive. If handsome Jack Robinson no longer believed that he was admired as a kind of gay Lothario, or as a born tenor artist, his manner would not be half so charming, nor his singing half so fine. Life would become repressed, tame, and commonplace. We should go about as if the world was all hung with plate glass mirrors, and the very walls had ears. But it is time that I left off philosophizing and came to business.

My name is Muggles, of the firm of Muggles, Buggles & Co., leather merchants in the Borough district, London. I am getting up in years now, and as we had prospered well in business, I decided last year, much to the satisfaction of my wife, and the delight of my daughter Mary, to retire from active business and become a sleeping partner in our concern. I am a cockney by birth and breeding, and so naturally love the country. It, therefore, seemed to me that a villa residence in a rural suburb would be a kind of heaven of rest and quiet in which to spend the remainder of my life. I determined to build a new house of my own, on Sydenham Hill, and my wife entered with alacrity and even eagerness into my ideas. Indeed, what with her criticism, suggestions, alterations, and her particular desires concerning the verandah and the bow windows, she made it very troublesome work both for me and the architect in getting the building to her satisfaction. The fact is, I was a little vain of my success as a business man. I was a little purse-proud, and my wife on her part was somewhat envious, I fear, of the imposing residence and pomp of her friend, Mrs. Jones, the buxom wife of a well-to-do hop merchant in Borough Road. Mrs. Jones lived in "Montague House," a square, white, plastered mansion, with a flat roof having a stone balustrade running around it, also situated on Sydenham Hill. A sort of tower rising from it gave it something of the importance of a castle. Mrs. Muggles wished to raise a rival tower twenty feet higher from our building, but the architect made a stand against this. My wife, how-

ever, so far carried out her plans as to eclipse Mrs. Jones in the body of the house itself (which was of an old English design), in the size of the rooms, and in the richness of the interior decoration. In May last our house, which my wife named "Belmont Villa," was finished, furnished, and taken possession of. I have said that I was proud of my success in trade, and I was equally proud of my house. A short carriage drive of about a hundred yards from the porter's lodge led up to the front door. The grounds were planted with new shrubs, but the big elm trees growing on the ground had been left standing, and gave quite a manorial aspect to the place. A pretty iron verandah, painted dark green, was twined with a young wisteria, rich hyacinths bloomed on the window eaves, and the flower-beds on the lawn were bright with tulips and forget-me-nots. I was proud, too, of my darling daughter, Mary, now grown to womanhood, and it was one of the chief and dearest cares of my life to see her well married and bestowed for the future. Mary was beautiful, not only in my eyes, but in the eyes of every one who saw her. There was something distinguished in her clear-cut profile, her dreamy eyes with their full lids and long lashes, her thoughtful but sweet regard, and in the soft brown hair which she braided round her head like a Grecian fillet. House-warming is an old and time-honored custom, and I determined to signalize this crowning period of my laborious life by a house-warming party. I would invite all my friends, and they would not only enjoy my hospitality but they would see my happiness. It was a happy notion, but there was a good deal of vanity in it for all that. I wished to know what my friends thought of my success—how much they admired my house and my daughter Mary. Mrs. Muggles was even keener on the subject than myself, and I could easily perceive that an anticipated triumph over Mrs. Jones was secretly firing her imagination. While the preparations for the party were going on, I was busy putting in practice another idea which had occurred to me. My young partner, Buggles, is of a very ingenious turn of mind, and indeed it was chiefly owing to the value of his invention of the composite belting that our firm had latterly amassed so much wealth. It was Buggles who first showed me that wonderful new American instrument called the phonograph, which picks up whatever is talked to it and speaks it all back again in exactly the same voice as the original speaker. Buggles had, by a beautifully simple but ingenious device, greatly improved on the American phonograph. He had made it so exquisitely sensitive that it would treasure up even a loud whisper, and give it out again the same as before. Talking in its neighborhood was faithfully recorded, and could be rehearsed again any time after, all the tones and manner of the original speakers being imitated with startling likeness. The idea which had occurred to me was to employ this phonograph secretly on the night of our house-warming, so that it would catch, as it were, and store up all that was said within its range. I hoped in this way to gratify my vanity not a little, and also to afford myself, and Buggles, who was also in the secret, a little private amusement.

The evening of our household festival was luckily a fine one. It was toward the end of May, and the air was soft and warm. The spreading hawthorn blossom scented the southern breeze, a pale primrose afterglow glimmered in the west behind the darkling belt of copsewood to the rear of the house, and the nightingale poured forth her liquid notes on the pure evening air. The drawing room was filled with a goodly company of young and elderly people, and everything seemed to be going on swimmingly. I had carried out my secret plan very skillfully. The phonograph, arranged by Buggles to work with perfect noiselessness, was hid in a recess of one of the windows, behind a curtain in front of which a sofa was drawn. It was quite invisible, and I felt sure that whatever was said by any one sitting on the sofa would infallibly be recorded.

So far all was well, and the excitement of the occasion and the plot I had laid elated me and raised my spirits so that every one congratulated me on my appearance, and Mary came and found me out alone to fling her arms round my neck and kiss me. In the course of the evening my eyes often glanced over to the sofa, so temptingly set in an out of the way place for quiet conversation. The first victims of my gossip trap were Mr. Dubbins and the portly Mrs. Jones. Dubbins, a little, black-whiskered man, was an old friend and school-fellow of mine. We had both been apprenticed to the leather trade under the same master, and had both independently started for ourselves in the same line of business. I prospered in my venture, but Dubbins did not. He married before his way was clear, and when his bu-

siness failed, he was almost destitute. He came to me in his distress, I lent him money, and he weathered the crisis. But, although Dubbins now held his head above water, and eked a living out of his business by executing small sub-orders, he was still a poor man. He appeared to have grown more and more distant with me of late years, and our ways had not thrown us very much together; but I had invited him to my house-warming for the sake of old times. Dubbins and Mrs. Jones were evidently talking in a very serious manner together, and I felt a twinge of sympathy for poor Dubbins, whose road in life had plainly not been as smooth as mine.

Not long after they had risen from the sofa I saw the Hon. Evelyn Vavasour and his friend, Captain Flopper of the Blues, lounging upon it, and I chuckled with satisfaction at the sight; for I had an interest, a deep interest, in Evelyn Vavasour. He was a tall, fair young man with a hawk-like nose, a brick-red complexion, a drooping moustache, and straw-colored hair. There was something aristocratic in his appearance and manner, and it was well in keeping, for he was a scion of one of the noblest families in England. From the attentions that he had paid to Mary, I had good grounds for seeing in the Hon. Evelyn Vavasour my future son-in-law, and the prospect gave me no small satisfaction. I was a self-made man; I had already carved out a fortune, and the marriage of Mary into one of the first families in the land would cap my self-satisfaction and my career. Captain Flopper, a large, fleshy, stall-fed soldier with a thick, dark-brown moustache and well-oiled black hair, seemed greatly amused with Vavasour's remarks.

A little later I saw my daughter Mary *à-la-tête* with a young artist named Clarence King, a frank, pleasant young man whose advice had been of much service to me in buying pictures for our new home. Mary was dressed in a creamy white dress of some delicate stuff, with a spray of white jasmine in her brown hair, her eyes were fairly beaming with light, and she looked so beautiful that my heart gladdened within me at the sight. As I looked from her to the tall figure of Vavasour, I could not help saying to myself: "They will make a pretty pair—a very pretty pair."

I was, of course, busy doing the honors of the house to all my guests, but I saw no others seated on the sofa. Supper time came, and when the guests were all out of the drawing room, I took the phonograph into my private study and set it so as to make it rapidly repeat all the talk which it had taken down. It was a novel experiment, and I listened with breathless interest to catch its amusing revelations. The first voices which I clearly distinguished were those of Dubbins and Mrs. Jones.

"Well, Mrs. Jones," began the small and squeaky voice of Dubbins, "what do you think of all this grandeur?"

"Mere ostentation, Mr. Dubbins, mere vulgar ostentation," replied the loud but bland tones of Mrs. Jones.

My face reddened involuntarily.

"Ah, Mrs. Jones," continued Dubbins, "when we see so much wealth and luxury, and remember at the same time how hard it is just now to make an honest living, much less a fortune, we cannot help thinking—you know—"

"You're right, Mr. Dubbins," said Mrs. Jones, with emphasis.

My temper was rapidly quickening and I was growing hotter and hotter, but I had no time to think, for the phonograph talked on.

"Now look at me, Mrs. Jones," went on Dubbins, "I've struggled hard in life, but I am still a poor man. Yet Muggles and I began life together, and, though I say it myself, I was once instrumental in saving him from ruin; for you know Muggles was at one time—well, not so steady as he has become since. But we will not speak of that here—some other time, you know. We began life together I was saying, in the same way and with equal chances. Everything seemed to prosper with him—everything he touched turned to gold, but I could only make an honest living. There's something queer about it, Mrs. Jones. The fact is there's some jobbery here."

"It's a falsehood, sir!" I burst out in my indignation, forgetting that it was only the phonograph that was speaking, "It's a falsehood, sir, every word of it."

I was burning with righteous anger at the miserable man's insinuations, which here came to an end. But the rest of the phonograph's revelations did not restore my good humor. My feelings changed like the colors of a kaleidoscope as the mimic tell-tale repeated its parrot gossip. A scrap of dialogue between the Hon. Evelyn Vavasour and Captain Flopper followed the innuendoes of Dubbins, and after that came a conversation between Clarence King

and Mary which overwhelmed me with astonishment and wounded me to the core. In the middle of this conversation the phonograph record suddenly ceased, for the clock-work actuating the instrument had run down. When all was over I formed a grim resolve to myself—I decided to rehearse the report of the phonograph before my assembled guests, and put to shame the abusers of my hospitality.

[TO BE CONCLUDED IN OUR NEXT.]

Dashes Here and There.

Mr Edison has gone to Rawlins, Col., with Prof. Draper's party, for the purpose of attempting to measure, by the aid of his micro-tasimeter, the heat of the sun's corona, which has never before been appreciable.

In 1876 there were altogether 217,962 miles of telegraph line in Europe. The aggregate length of wire was 647,096 miles, and the number of offices was 27,286. The number of messages forwarded during the year was 81,697,981. The corresponding number in 1875 was 77,847,955.

Edison has invented a machine for condensing the noise of the elevated railways of New York, running it down a pipe to the Battery, loading it on the Sound steamboats and dumping it near Rattleborough, Vt. Great man, that Edison! The Rattleborough people expect to can the noise and sell it for Fourth of July celebrations.—*Phil. Bulletin.*

UNDOUBTEDLY A MARRIED MAN.—Scene, a street car; time, 2 A. M.; dramatis personæ, alert conductor, one passenger, a sleepy night operator returning from work, and driver:

Alert conductor (referring to street)—"John."
Sleepy passenger (in a doze)—"Ye-e-s."
Driver (to horses)—"Get up."
Sleepy passenger—"In a minute."

A practical and somewhat important use of the telephone is being made at Amherstburg Station of the Canada Southern Railway. The railroad company have a telephone wire under the Detroit River, from the upper slip on the Canada side to the Stony Island slip, for greater convenience in communicating orders for the movement of the ferry barges which are now used, towed by tugs, to transport laden cars, pending the repairs of their large steamer Transfer.

The 'Ouse of Lords at 'ome is nothing if not dignified. The House of Commons readily granted permission to the newspapers to connect their offices by telephone with their chamber in the Parliament buildings. The Lords will have no such new fangled invention disturbing the atmosphere of old fogysm that surrounds them. The impudent paper men actually wanted to attach the vocal wire to the House of Lords, but "me Lords" refused the unblushing request.—*Detroit Free Press.*

"The valley telegraph operators of East Saginaw, Mich., have organized under the title of the "East Saginaw Telegrapher's Rifle Club," for target practice. By-laws have been adopted, and the following officers elected: Captain, William B. Calhoun; Secretary, M. W. Russell; Treasurer, Edward Miller. There are about ten members altogether, some of them very good shots, who may, after a little practice, be able to compete with other rifle teams; anyway they intend having a little outside recreation.

By means of a series of cameras standing one foot apart and operated by electricity, a California photographer has succeeded in taking negatives of every phase of a trotting horse's action while making a complete stride. In this way it becomes possible to study the successive positions of a horse's body, legs, and feet while he is going at full speed. The photographs show the fast trotter's feet to be all off the ground together twice during the making of the stride, contrary to the assertions of the authorities hitherto accepted.

The microphone is a striking illustration of the truth that in science any phenomenon whatever may be turned to account. The trouble of one generation of scientists may be turned to the honor and service of the next. Electricians have long had sore reasons for regarding a "bad cross" as an unmitigated nuisance, the instrument of the Evil One, with no conceivable good in it, and no conceivable purpose except to annoy and tempt them into wickedness and an expression of hearty but ignominious emotion. Professor Hughes, however, has, with a wizard's power, transformed this electrician's bane into a professional glory and a public boon. Verily, there is a soul of virtue in things evil.—*Telegraphic Journal.*

The death-dealing qualities of a flash of lightning are well known, but records of its life-saving deeds are rare, in fact, it is doubtful if there is any recorded instance of lightning saving a man's life. At 9 o'clock, a night or two ago, when a schooner was running through darkness and storm into New York Bay, a vivid flash of lightning showed a man clinging to an upturned skiff. The schooner's boat put out, just in time to save the exhausted man, who can thank that stroke of lightning for his escape.

During the afternoon of Sunday, June 23, a thunder-storm of tropical violence raged over London. The lightning was both forked and sheet, the thunder-claps resembled sharp salvos of artillery, and the rain literally came down in bucketfuls. Many houses, chimneys, and trees were struck by the lightning. Last week a bolt of lightning shivered the Produce Exchange flag-staff in this city, and glancing across the way entered the window of Hughes, Hickox & Co.'s store. One of their clerks had a narrow escape. It passed out without doing further damage.

We are in receipt of a copy of THE OPERATOR, a paper published in New York, in the interests of the Telegraphic Fraternity. It proposes the organization of a Protective Association, for the protection of their interests. Having served that fraternity for nearly twelve years we heartily commend such action, but above all things avoid a strike, and not be bulldozed by a set of executive officers, as were in the old league. We vote yes, organize by all means, and let the fraternity protect themselves against unreasonable reduction of wages.—*Oxford, Ohio, Citizen.*

The *Globe* has opened a correspondence complaining of the unsatisfactory state of the telegraphic system in the metropolis. It is said that a message can often be sent more quickly by hand than by telegraph. This, of course, refers only to short distances, and, in other respects, the grumbling of the *Globe's* correspondent seems a little exaggerated. Only the excited feelings of a paterfamilias, disappointed of the salmon sent for by telegraph for his dinner, can justify the assertion that a "paternal government considers a mile an hour a fair speed for telegraphic messages to travel at within the metropolis." Still, it must be admitted that there is some cause for dissatisfaction, both as regards speed and price; and an official department, which is also a monopolist, would be more than mortal, or, at least, more than British, if it did not require stirring up from time to time.—*London Electrician.*

The *London Engineer*, in noticing the controversy which has arisen regarding the priority of the invention of the microphone, says that Prof. Hughes has really been anticipated on every point by Mr. Edison save one, which one is in itself doubtful, to wit, whether Mr. Edison knew that exceedingly minute sounds could be transmitted by the application of the principle (which he no doubt discovered,) that carbon is susceptible to a difference of conductivity by a change in pressure. The *Engineer* is by no means satisfied with the general denial given by Mr. Preece and Prof. Hughes to the allegations of dishonorable conduct on their part, advanced by Mr. Edison, and it calls upon Mr. Preece in particular to immediately refute if he can the precise charges made by Mr. Edison.

A MATTER OF FORTY CENTS.—A gentleman of our acquaintance, walking up State Street after the shower last evening, happened to fall in behind a couple of colored men who had evidently just returned from a trip down the harbor. They were relating an experience with a wandering minstrel. One of them said to the other:

"He wouldn't sing the Angel Ga-bril for less than a dollar."

No. 2—"Why, what's that for? They gib him sixty cents, didn't they?"

No. 1—"Yas, they gabe him sixty cents, but he wouldn't sing for less than a dollar, cos it was lightnin'."

No. 2—"Yah, dat so? If he was goin' to git struck by lightnin' he go't struck for sixty cents just's quick's he wud for a dollar, wouldn't he? What he want a dollar for?"

No. 1—"Oh, I dunno; 'spose he didn't think sixty cents was 'nuf' fortune to leave his family."—*Boston Globe.*

PROGRESS IN AMERICA.—As an illustration of how far America is ahead of us in the practical application of telegraphy, we may mention that we have seen petty places in the backwoods, which had no railway within whole counties of them, no coach, no inn, and only, perhaps, a single store, which were nevertheless, not without telegraph offices.

English hamlets of the same size could only owe such a convenience to the squire's being a connection of the Postmaster-General. But American telegraphists consider that, if a town is small to-day, it may be big to-morrow; besides, there is a keen competition to establish branch wires, which may act as feeders for the main lines of communication. So the farmers all along the route undertake to have poles cut and laid ready at equal distances; the companies put up the wires; and there seldom fails to be a sharp youth or damsel in the neighborhood who either has or will soon have learned to work the instrument, and will attend to the office for a liberal commission on each message. Thus is how you often come upon the wires running through the woods in places that do not even boast of adequate road.—*London Electrician.*

A Mr. Peppard, of Basking Ridge, N. J., proposes, in the *Scientific News*, the following ingenious plan to awaken persons without arousing any others who may be in the same room: Take a couple of Smees' Cells, No. 1 zincs, etc., fill the cells ready for use and attach the wires, insulated; let part of the wire, bare, be fastened to the person's arm or leg, and then have a clock close by, with the face punched with small holes to fit the wire, these holes are made at each hour or half hour, as desired; one end of the wire is then fastened from the inside so that the end protrudes just enough for the hour hand to touch it, yet the minute hand does not; the other end of the wire is attached to the hands or the rod on which the hands revolve. Now then, say the person wishes to be awakened at 3 A. M. and it is 10 P. M. as he is retiring, let him put the wire in the hole over 3 and attach the wire to himself and retire. Of course, the minute hand cannot touch the wire at figure 3, so that no connection is made until the hour hand comes in contact with it at 3 o'clock, when, the instant it touches, the current is closed and the shock given the person will awaken him as quick as a flash.

THE TELEGRAPH IN SAXONY.—The "Imperial Postal and Telegraph Service" extends to all parts of Germany except Bavaria and Wurtemberg, which are independent of the general Government. There were employed in 1875 in the General Post Office at Berlin 191 officials, whose salaries averaged \$923.53 per annum. 25 received more than \$1,000 per annum. The Postmaster-General received \$5,735.80, besides a house free of rent. The Director of the Post \$3,570, and the Director of the Telegraph the same. The employees in the service numbered 36,527; average salary, \$281.11. At the 41 principal cities Postmasters received \$1,904 per annum, except at Berlin, where the salary was \$2,500; telegraph operators of the first class, \$392.70; second class, \$285.60; women, \$214.20; letter carriers, first class, \$285; second class, \$128.42. These salaries are slightly increased by Christmas presents, a recognized custom. Formerly the other members of the postal and telegraph service were allowed "extras," but retrenchment has abolished nearly all those perquisites, including "free coffee." In the Railway Service the Superintendent's salary is the highest, \$1,581.68; few employees receive over \$1,000 per annum. Section hands are paid \$144.80 to \$174.45 per year. A certain sum is allowed to all employees for clothing, and some are furnished with houses and servants. Ticket agents receive 1 per cent, commission on the tickets they sell. The engineers and firemen are allowed for any savings they make in the coal and oil furnished to the trains by the Government. The salary of an engineer is \$535.50; firemen, \$300; conductor, \$444; ticket agents, \$723 and \$609; freight masters, \$571.

MR. FRANK M. DAVIS, of the Western Union office, Burlington, Vt.,—a well-known and excellent operator, by the way—sends the preface to Dickens' "Oliver Twist," containing 898 words, written on a number one blank, commencing under the word "To," keeping to the right of the words, "Read notice at the top," and finishing an inch from the bottom. With an inch and a half to spare he had 819 words. As Mr. Pepper had only 644 words in the latter space, this, of course, beats him in the number of words; but Mr. Pepper's copy was very much more legible—no trouble whatever in reading every word of it. However, Mr. Davis' achievement is very creditable.

The Telegraphers' Rifle Club.

The first monthly competition of the Telegraphers' Rifle Club for the prize rifle, took place at Hartung's 200 yard range, at Morrisania, N. Y., on Saturday, July 20th. There were 36 competitors, and great interest was taken in the match. As a proof of the rapid improvement made in shooting, it will be observed that Mr. C. D. Haskins, who now stands at the top of the list, was at the bottom in the match for the championship badge a month ago. The rifle is to be won three times before becoming the property of any individual. The following is a list of the scores:

SCORE.

C. D. Haskins	43	J. Metzger	29
T. Lobig	41	H. Prince	29
D. Bryce Scott	41	W. H. Freeman	28
A. A. Knudson	39	W. Lockert	23
M. W. Doran	39	E. B. Van Keuren	23
P. Hornack	38	H. Baer	23
M. B. Miller	37	M. A. Brien	22
P. L. Watson	37	R. Farsholm	22
A. Metzger	36	J. K. Knight	22
W. H. Collins	35	C. Lamberty	21
G. T. Musson	35	Geo. Marks	19
P. B. Westervelt	35	G. O. Jenny	15
R. W. Pope	34	L. Steiner	9
L. E. Loefferts	33	J. Kohout	9
D. B. Mitchell	32	G. Hauser	8
J. B. Collins	32	H. Newman	6
W. Glass	31	J. A. Stadtmiller	3
M. T. Wilbur	30	A. M. Burk	0

Will you please answer through the columns of THE OPERATOR what varnish is used to keep the brass on new instruments from tarnishing? and, 2—if there is any way to restore the color to the hard rubber covering the spools after it has become gray, or rather brown?

- Ans. 1. Telegraph instrument maker's lacquer
2. Turn it down, and re-polish.

PERSONALS.

Pete Dolan of the C. and N. W., has returned from Texas looking well.

L. C. Fritts of Iowa, is utilizing his college vacation by subbing for the C. and N. W. railway.

Mr. Thornwell Fay has been appointed night operator at Algiers, La., Morgan's, La., and Texas, R. R.

Mr. John Malten has accepted a position at freight office, C. St. L. and N. O. R. R. at New Orleans.

Del Langworthy, late of Oil City, is engaged in the grain business at Kansas City, Mo., and doing nicely.

The old veteran telegrapher Ed Ward, formerly manager at Tidoute, Pa., has been transferred to Oil City Pa. office.

James P. Keene, of Oil City, has been appointed manager of the W. U. at Franklin, Pa., his home. He is assisted by Albert M. Smiley.

C. M. Carr, the "tourist," is now working for the W. U. at St. Louis. His many friends will be glad to hear he has "braced up" in every way.

Mr. Geo. W. Hurd, who recently resigned as press operator, W. U., Houston, Texas, is now successfully engaged on his stock rancho on the Rio Grande.

Henry Conroy has resigned his situation as Deputy County Recorder at Le Sueur, Minn., and accepted the Tipton Iowa agency for the C. and N. W. R. R. Welcome.

At Quincy, Ill., July 15th, a dead body was found in the bay, which proved to be that of J. D. Kelly, late telegraph operator at Palmyra. He committed suicide on account of some debts he owed.

Mr. Mauzy, at one time of St. Louis W. U. office, is subbing at Oil City. Colonel Drake has been appointed to take charge of the Oil City office of the new company, the International, a local concern in the oil region.

Mr. W. H. Hoffman, who for a year past has been telegraph operator at the depot, has resigned his position, and left this morning for Virginia, accompanied by his wife. They will make that State their future home.—*Tulchussee Floridian*.

Mr. Archie Mack, a well-known southern dispatcher, has resigned his situation with the C. St. L. and N. O. R. R. at McComb City, Miss., and been succeeded by Mr. Ferd, formerly of the New Orleans office of the C. St. L. and N. O. R. R. Co.

T. H. Donnelly, who for the past two years has filled the position of night train dispatcher, Bridge Division, Union Pacific R'y, died last week at his residence at Omaha, Neb., of consumption. Deceased was very popular, and leaves a large circle of friends to mourn his loss.

One of the finest and most intelligent operators in the W. U. service, Wm. Loper, late of 197 Broadway, has left the business, and is at present private secretary to J. Waldo, general freight agent of Texas Central railroad at Houston, Texas. Billy has made himself deservedly popular in his new home, and is doing splendidly.

Mr. C. Hacking of the Canada Southern office, Listowel, Ont., was in town last week, and favored us with a call. He was en route for the west on a month's vacation. We learn from him that Canadian operators would gladly welcome a protective association, and only await its inauguration in "the States," when they will gladly fall in line.

The "Big 3" of Houston, Texas, W. U., have dissolved. No. 1, Hank Stanberry, *alias* "the man with a white hat," alone remaining. No. 2, Frank Kurd, has gone to look after his rancho near San Antonio, and No. 3, Tracy Barnes, has returned to his duties at Clinton, Iowa. *Aprpos* of this begira we might add that the town has again resumed its normal serenity.

The widow of D. C. Bleakney, late chief operator at Houston, Texas, who died in that city last month of consumption, desires to learn the whereabouts of Sam Bleakney, brother of her late husband, who is supposed to be working on some railroad line in Pennsylvania. Any one knowing Mr. Bleakney's address will confer a favor by notifying Mrs. D. C. Bleakney, care manager W. U. telegraph office, Houston, Texas.

J. P. AND M. R. R., FLORIDA.—Mr. W. R. Goodwyn is working temporarily at Tallahassee depot, J. P. and M. R. R. Mr. Eddie B. King, of Greenville, has returned from a visit north. Mr. Walter Davidson, who was Eddie's "sub" has gone to Ellaville. "Blessed is he who bloweth his own horn." Mr. E. B. Jordan, agent and operator at Quincy, is connected with the brass band there, and does it well on a B flat. "Music hath charms."

A Detroit Western Union man complains that the operators in that office are paid the smallest salaries, and expected to do more work than in any other office in the country. He says that men in the office who were first class operators before Noah's ark, get but from \$50 to \$60 a month. Some of the night men, he adds, at one time protested in a written paper, and were told if they didn't like the hours, there were plenty of operators who would fill their places.

The nuptials of Dr. Benjamin F. Nice and Miss Ettie J. Mickley, were celebrated at Hamburg on Saturday afternoon. Miss Mickley had faithfully occupied the position as manager of the Western Union Telegraph office for a number of years, and nearly a year ago was also appointed an operator of the Philadelphia, Reading and Pottsville Telegraph Company, both lines having established an office in the express office on Main Street. The ceremony was witnessed by a number of the relatives and friends. After Rev. Mr. Peters had tied the knot, the happy pair were taken to the depot, and left for Philadelphia, New York, and other points of interest. The well wishes of many friends accompanied them.—*Reading Dispatch*.

FINE WRITING.—I see in THE OPERATOR of July 15 that a Mr. Pepper had copied Thanatopsis, (six hundred and some odd words) on a W. U. No. 1 blank, and asking if any one could beat it. In 1871 or 1872, myself and E. J. Wilson, who is still here, made a trial to see which one could get the largest number of readable words on a W. U. No. 1 blank. He commenced on the line "To," and succeeded in writing 1630 words. I commenced one-tenth of an inch below the line "To," and put down 2039 words. If I had economized my space as he did, I could have written 400 additional words. We copied from a newspaper. The writing is very plain, and can be read by any one. The blanks we used were three-tenths of an inch longer than the present ones, and minus the present marginal advertisement, otherwise the same in size. I have the two copies on hand subject to the inspection of any one who doubts.

Very truly yours,

JNO. B. MORRIS

Chief operator, W. U. T. Co., Nashville, Tenn.

PORTLAND, ME.—C. C. Bedlow, son of the late superintendent J. S. Bedlow, has been designated as acting superintendent, *ad interim*, of the Third

District. Mr. Bedlow has been employed in his father's office for years, and is thoroughly posted in the business. We all wish him success in his new labor. A. G. and E. B. Sayles (brothers) operators in this office, have suddenly been called to their home at Ingersoll, Ont., by the death of their mother. Mr. M. H. Bryant subs for one of them, while M. E. Hayes, a rising young operator fills the place of the other. D. C. Shaw (Oney Gagin) has taken a cottage at Old Orchard Beach for the season. He says there is nothing like it, and from the following poetic gem found on his table the other day, I should judge his city life is at an end.

"No more city life for me,
But give me a chance to sit under a tree,
Where I can smoke my pipe with glee,
And watch the females go into the sea."

I saw an article in the Boston Herald a short time ago relating to people who could afford a vacation helping those who were too poor to have one. Also, admitting corporations and business firms giving their help a vacation and let their salaries go on, so all could have a rest of a week or two, as after such a rest a man feels entirely different, and goes to work with new life. I thought of the telegraphers who are confined indoors the year around, and was in hopes that the paper might be read by our high officials, and make an impression upon them. We are having cool weather here just now, thermometer ranging from 62° to 70°. After such excessive hot weather as we had previously, it is a little too cool. P.

OMAHA, NEB.—Charles B. Havens, who has for the past five years filled the position of train dispatcher on the eastern division of the U. P. R. R. at this place, resigned July 1st, to enter upon the duties of superintendent of Bridge Division and local freight agent for same corporation. He was succeeded as dispatcher by E. D. Titus, who has been first assistant for the past three years. J. W. Ellsworth, an old Dominion agitator, is now first assistant dispatcher. In the U. P. general offices are to be found L. H. Korly, assisted by Messrs. G. M. Myers and Leonard Hohl, Mr. Hohl being the latest importation. At the W. U. office Mr. Drake sports the feathers of chief. C. E. Mayne is third chief, hours from twelve M. to eight A. M. In this office are to be found many well-known and experienced telegraphers, Messrs. Armstrong, Cunningham, McNevins, Ritchie, and others. The manager on the A. & P. side is L. M. Rheem, the man who works a key like unto an inexperienced boy pumping water for a circus (so awful fast). The W. U. boys have not yet got over their elation at being moved into new quarters, but it is to be hoped that time will cool them off. Mr. Jno. McNevins who has been sick himself for the past three weeks, and is just getting around again, had the misfortune to lose his little son, three years old, by typhoid fever, and his wife has been lying at the point of death for two days with the same sickness. This is a sad case, and the afflicted husband and father has the heartfelt sympathy of all who know him. BYRNE.

MARRIAGES.

FALLS—MARTIN.—Sunday, July 7th, Mr. Emory H. Falls, of Secretary's office, to Miss Amanda Martin, late of 197 Broadway.

SMITH—MAPPA.—June 13, at Los Angeles, Cal., by Rev. Mr. Packard, Mr. J. B. Smith, operator W. U. telegraph office, to Miss Jennie S. Mappa.

HENNINGTON—MARTIN.—July 16th, at the residence of the bride's father, Brookhaven, Miss., Luther F. Hennington, chief train dispatcher C. St. L. & N. O. R. R., McComb City, Miss., to Miss Mollie Martin, of Wests, Miss.

DEATHS.

July 24, at his home, at Holyoke, Mass., of consumption, Mr. Henry Coombs; aged 22.

July 5, at Corsicana, Texas, of typhoid fever H. T. Vaughan, manager W. U. Tel. office; aged 30.

HAMILTON.—June 7, at Pictou, N. S., Mr. David J. Hamilton, for many years operator for the Western Union Telegraph Company, aged twenty-nine years.

BIRTHS.

To Charles L. Stoddard, manager W. U. Tel. office, Ridgeway, Mich., a daughter. Nine pounds.

July 18, to V. P. Smith, of the Western Union Telegraph office, Harrisburg, Pa., a daughter, first edition. Congratulations.

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The best fancies of a fertile brain, smooth in style, and epigrammatic, but not flashy. There is in them all a quiet undercurrent of quaint dryness, that is irresistibly attractive.—*American Bookseller*.

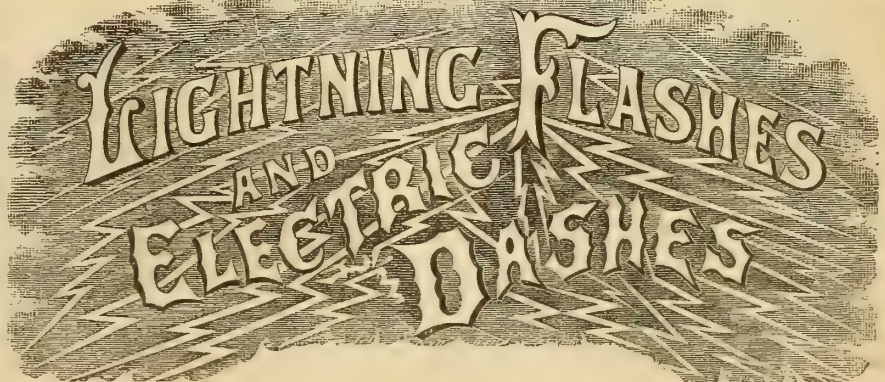
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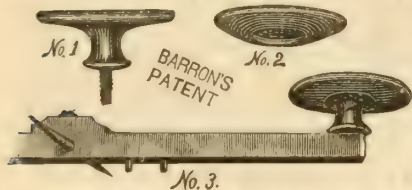
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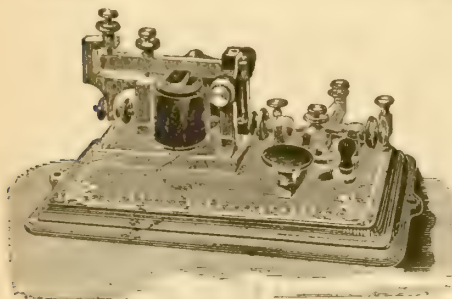
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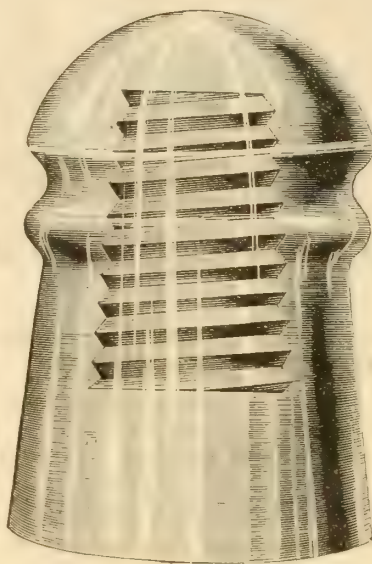
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By J. ALBERT CLIPPINGER,

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THE OPERATOR

A JOURNAL OF
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August 15th, 1878.

Volume IX.

Whole No. 108.

To the Electric Telegraph.

"Harp of a thousand strings!"
Swept by a mightier minstrel than the wind;
A viewless spirit whose unfettered wings
Leave all save thought behind.

Outvying in its flight
The fleeting footsteps of the panting steed,
The arrowy keel that cleaves the billows bright,
Or the fierce engine's speed.

Thine is the magic spell,
With deepest tones the human heart to throb;
The power outvying feeble speech, to tell
Tidings of good or ill.

Thou who dost herald on
To the vast inland, stretching far and wide,
Tales from the ships, whose moorings yet unwon,
Must still the wide waves ride:

Telling of kings and thrones,
A nation's downfall or an empire's birth;
Revealing, in thy weird and mystic tones,
Strange histories of earth—

Of famine, fire and flood,
The fearful earthquake or the whirlwind's breath,
The ocean tempest, or the field of blood,
The pestilence and death:

Or tidings sweet and dear,
The blissful messages of love and peace,
To waiting hearts that yearn from thee to hear
Hope, joy, return, release!

Thou who shalt link all lands;
Thou who at last shalt span the stormy sea,
Binding the nations into brother-bands,
What shall we sing of thee?

The earth whereon we tread,
The mighty billows rolling over thee, [spread,
The lightning's flash, the sky, the clouds o'er-
Shall yet thy minstrels be.

Thou messenger of mind!
Thy triple cords shall make the electric zone
Which heart to heart, as shore to shore shall bind,
When space shall be unknown!

—American Telegraph Magazine, June, 1853.

Telegraph Line Repairing.

J. A. CLIPPINGER IN "SAM JOHNSON."

At the time that Andrew McFinn's adventure occurred there was an important mining claim in litigation at Calaveras involving the title to a mine of great value. One of the means adopted by parties in San Francisco to secure the first information of the decision in such cases, was to have the wire cut, and then, by mounted messengers, send to the next telegraph office toward San Francisco from the place where the wire was cut, and forward the decision. To guard against this practice McFinn was sent to Calaveras by the telegraph company to keep vigilant watch over the line during the progress of the trial, particularly toward its close. He was especially charged to keep a sharp lookout for Musquito Gulch, for if the line was severed at that point it would take several hours to make the connection again.

The case was given to the jury one miserable, hot, sultry, July day. McFinn immediately started on foot along the line toward Musquito Gulch, ten miles distant, "the way the bird flies," but the way a footman had to go up hill and down, it was almost fifteen.

As McFinn was nearing the summit of the mountain above the Gulch, about two o'clock in the afternoon, a man on horse-back shot past him like an arrow from the strung bow of an Indian. McFinn knew then that the deed was done that he had been endeavoring to prevent, and had he been the possessor of a rifle he would have paid his

respects to the bold rascal. But he did not. A few steps brought him to the tree to which the line had been attached. It had been severed, sure enough. He looked down from his dizzy height to the bottom of the gulch a thousand feet below, and shuddered at the thought of having to go down there, and climb up again with the wire attached to him. But he was not a man to hesitate at difficulties or dangers, and so immediately set about performing the task.

After three hours of the most incessant labor and indescribable suffering, caused by the blinding heat, the falling rocks and loosened dirt, he reached the summit again. After a short rest he ascended the tree cautiously, crawled out on the limb extending over the Gulch, made the wire fast to the end of the limb, and then turned about to descend to the ground. He did not do the latter, however. But every hair on his head *did* stand straight out, and he turned pale and trembled so violently that he almost fell from the tree.

On the same limb, and but a few feet from McFinn, stood a large bear, leisurely contemplating McFinn's movements as though he were anxious to acquire a knowledge of the telegraph line repairing business, or, more likely he was calculating how many meals McFinn would make for a bear of his size and appetite. McFinn scrutinized his unwelcome caller with consternation and alarm. Not so Bruin. He watched McFinn with great complacency and coolness, and seemed to enjoy the situation hugely, if one could judge by the grin on his hairy face. Sitting astride of the limb of a tree, over a yawning abyss, a single telegraph wire behind, and a huge bear immediately in front, is not the most enviable position one could wish to occupy. McFinn did not think it was, and he certainly ought to know. He called upon all the saints he ever read or heard of to come to his rescue, but in vain. Apparently there were none in that part of the country. He made a movement toward the bear to frighten him. The bear sat up, reached his arms toward McFinn, seemingly to assure him that he would embrace him as fondly as parent ever did a loved child. McFinn had been bugged oftener than once, and would not have objected to its repetition had the conditions been favorable, but at present he would beg to be excused. The bear waited some time for McFinn to come to him, but not being accommodated, he started toward McFinn. McFinn tried to frighten him away by kicking, striking, cursing and yelling. Bruin did not heed his admonitions, but boldly advanced upon him. Desperate emergencies beget desperate remedies. McFinn slid off the limb, and hung to the wire, intending to reach the other side of the Gulch, if possible, by passing one hand over the other. Bruin seemed to understand the situation almost as well as McFinn did, and with apparent human intelligence, took hold of the wire with one of his paws, and began shaking it. McFinn gave up all hope of life, and was earnestly calling on the Lord to forgive his many sins, when the report of a rifle rang in his ears, and Bruin fell from the limb, and went bounding, and rolling, and tumbling to the bottom of the Gulch. McFinn's hands were almost cut in two, and were bleeding profusely, so that he could not hold on much longer. He made an effort to reach the tree, but his hand slipped, and he too, went down, down, to the ravine beneath, striking the side of the Gulch, bounding off, only to strike lower down, and be struck in turn with loosened dirt and rocks. His face was scratched, and his clothes torn by brambles and briars. He dashed on, and on, and on until he reached the bottom apparently lifeless, and within a few feet of his, but a moment before, dreaded enemy—the bear.

Who is this running down the Gulch toward our fallen hero, a rifle in her right hand, a hatchet in her left, moccasins on her feet, and her long, black hair streaming behind? It is the "Maid of Musquito Gulch," the heroine of many daring adventures. She approached the bear cautiously. Satisfied that he is dead, she hastens to McFinn, turns him upon his back, puts her ear to his heart, to learn if it still beats, straightens up, gives two long shrill whistles, and then hastens to apply cold water to McFinn's face from the foaming stream at his side.

What dusky forms are these approaching? Two Indian squaws. They have come in answer to the maiden's call. By direction of the maiden the squaws prepare a litter by laying brush and small limbs crosswise on two poles. Upon this McFinn was laid, and carried by the squaws to the maiden's home at the mouth of the gulch, four miles distant. It was a slow and fatiguing journey through the winding canon. They were obliged to halt many times to recuperate their strength, and also to revive

the faintly living McFinn by the application of cold water to his head and face. It was after nightfall when the maiden and her cortege reached her father's rude log cabin at the mouth of the Gulch, where it widens out into a beautiful little valley.

McFinn fought the "Grim Destroyer" Death for four long weeks before he finally overcame it, and regained his senses. The "Maid of Musquito Gulch," McFinn's rescuer, was his faithful attendant all this while, and until his former strength was fully recovered.

McFinn's absence was noted, and search instituted for him. His tools were found at the foot of the tree where he had left them, and it was currently believed that he had been murdered by some one who had attempted to cut the line, and that the wild beasts had devoured his body.

McFinn regained his bodily strength, but still he was loath to leave the rude but hospitable home of his kind deliverers. He did not do so until the "Maid of Musquito Gulch" consented to become the wife of Andrew McFinn. She joined him in his camping expeditions in the summer season, repairing telegraph lines, and traveled with him until an interesting event occurred that made a proud man of Andrew McFinn, but which rendered the camp so "squally" that Mrs. McFinn was obliged to abandon traveling.

Paris.

I promised to say something more about my visit to Paris last summer, but accounts of travel in countries one has never themselves visited are generally so dry reading, even when carefully written, that I thought it would be a favor which the readers of THE OPERATOR would not fail to appreciate did I spare them the infliction of another couple of columns on this subject. However, as it is just a year ago since I spent a very enjoyable week in the gay and beautiful capital of France, my thoughts during the past week have more than once carried me back to Paris; and, besides, when I promise anything I generally make an effort to keep my word; therefore, with this apologetic preface, I will try and tell you, as briefly and readably as I can, a little about some of the things in France that struck me as novel.

First of all there is a strange uniformity about the appearance of the houses. The reason is that all work of that kind is done under the supervision of government officials, who apparently are the architects as well. Theatres, circuses, and other places of amusement are also under government supervision, while, moreover, tobacco, the telegraphs, and many other things are government monopolies. Another thing that strikes a stranger is the manner in which the streets are laid out. They are clean and well kept, and, instead of running parallel, as with us, radiate from a common center like a star. Napoleon's idea was, in case of an insurrection, which, unfortunately, are not uncommon in excitable France, to be able to place cannon in this centre, and sweep the city from end to end. But man's ingenuity is often turned against himself. It is said that the monkish inventor of gunpowder lost his life by being blown up by that explosion. And it was somewhat similar in this case. When the Communists of 1871 began their work of wanton destruction, they raised their cannon by means of steam power to the top of the Arc de Triomphe, from which as a centre twelve principal avenues radiate. From this formidable position—one which gave them the full sweep of the city—they bombarded Fort Valerian, and the troops only succeeded in dislodging them after long and heavy firing, during which the triumphal arch was much injured.

Napoleon's last original intention was to construct four triumphal arches in commemoration of his victories. Only two have, however, been completed—the Arc de Triomphe and the Arc du Carrousel. The former is the most elaborate, and cost \$450,000. It is 90 feet from ground to keystone, and 45 feet in width. The frontage is 150 feet, and the total height 158 feet. There are groups in bas-relief representing incidents in French history, many of the figures in which are ten feet high. Under the arch are the names of 386 noted French generals. There is an excellent view of Paris from the top of this structure, Fort Valerian and the Bois de Boulogne, the fashionable drive, on one side, and the hill of Montmartre, Notre Dame, the Pantheon, and the Hotel des Invalides and the tomb of Napoleon on the other.

Notre Dame Cathedral, so I was told, is 52 yards wide, by 140 long, and covers about 7,150 square yards. The towers are 264 feet high. The bell weighs 32,000 lbs., has a hammer weighing 980 lbs.,

and is one of the finest in the world. In the revolution of 1793, the church was converted into a "Temple of Reason," and the presiding goddess, the wife of one of the Communists, rewarded devout worshippers with a kiss! The galleries were subsequently turned into haylofts, and horses were stabled in the chapels below. Napoleon I. was crowned here (1804). Napoleon III. was married here, and the Prince Imperial, whose engagement to Princess Thyra, of Denmark, has just been announced, was baptized here (1857), on which occasion the cathedral was magnificently decorated.

The Hotel des Invalides is intended "to secure a comfortable home for aged, wounded, and infirm veterans who have shed their blood or consumed their strength fighting for their country." It extends in all over about eighteen acres, with ample accommodations for more than 5,000 invalids. At present, however, there are probably not half that number there. During the Siege of Paris by the Prussians, when bread was hard, black, and all but unobtainable, about fifty of these poor veterans died every day for want of proper nourishment. They all get up in the morning, file to meals and church, and retire to bed amid the furious rolling of drums. Napoleon's tomb is here. The walls are of polished marble, and the pavement of mosaic. The sarcophagus consists of a single and immense block of polished marble brought expressly from Finland, and weighing nearly sixty tons. It is said to have cost \$70,000.

There are a large number of cemeteries in and around Paris. The finest of these is Père la Chaise, in which about fifty burials a day take place. The burials are of three kinds, a fact that struck me as rather peculiar. First there are "fosses communes," or public pits, where, if proof of poverty can be adduced, bodies are interred free; then there are "concession temporaires," where, on payment of fifty francs—a franc is equal to about nineteen cents—a small portion of ground is allotted, which may be retained for five years, after which the body is taken up and placed in the "fosses communes," and, lastly, there are the "concession à perpétuité," or complete purchase, about twenty feet costing 500 francs. I didn't count them, but was told that there are some 15,000 monuments in the "Père la Chaise," and that the cost is roughly estimated at \$25,000,000. Some of the monuments are very handsome. One of these is that to General Gobert. It appears that the General left all his money to his son to devote to art. The youthful Gobert appears to have been an affectionate son, for he spent it all on this monument to his father. Among the most notable monuments is that to Abelard and Heloise, which is frequently called the Shrine of Disappointed Love, and decorated with fresh wreaths by sentimental persons whose love affairs have not been all that they could have wished. You remember that Abelard and Heloise were married, and then cruelly separated by jealous relatives, and only, as the inscription on the monument says, "reunited in the tomb." Then there are monuments to eminent authors, artists, musicians, and composers, such as Beaumarchais, Plékel, Méhul, Chopin, Rossini, etc., and to many military celebrities and others. Marshal Ney's tomb has no inscription. Another monument marks the spot where Ney was shot by order of Louis XVIII., for aiding Napoleon I. in his landing from Elba.

The Père la Chaise Cemetery and a park called the Butte Chaumont, near by, were the last strongholds of the Communists of 1871. I feel very bitter toward Communists since my visit to Paris. They seemed to go in for wholesale destruction of life and property, without stopping to consider whether it was necessary, or would be likely to do them any good. They burned, tore down, and wantonly disfigured the finest buildings, monuments, and works of art, wholly from what Artemus Ward used to call "pure cussedness." It positively makes one sad to see the outrages these lunatics were guilty of. When the Germans occupied the city, though enemies, they molested nothing, and, I think, deserve all praise for their magnanimity; but these villainous Communists, besides the massacre of so many men, any one of whom would have equaled a whole army of these cowardly butchers, turned the magnificent Palace of the Tuileries into a dreary ruin, pulled down the Vendôme Column, burned the Palace of Justice, knocked arms and heads off the splendid statuary in the Louvre, and committed all sorts of depredations of this character. They say Communism is about to be introduced into the United States. I hope the officers of the law will show its followers no mercy, but exterminate them root and branch as they would so many dangerous wild animals. These rascals, who won't work

themselves, want to live on the labor of others. That's the coolest thing yet.

The vaults underneath the July Column in the Place de la Bastille, the site of the old Bastille Prison or fortress, were filled with gunpowder and other combustibles by the Communists, who fired a fuse arranged to reach and ignite the powder in four hours, at which time it was expected that the Versailles troops would reach the Place de la Bastille. Thus they thought to blow up both the troops and the column, and to devastate the neighborhood all at one time. But their intention was frustrated by the arrival of the troops much earlier than had been expected. Then they took possession of the Roquette Prison, where condemned criminals are confined, and where executions by the guillotine take place, generally soon after daybreak. The convicts awaiting their doom were liberated and joined the Communists, but the keepers, refusing, were taken out, placed against a wall in the Père la Chaise Cemetery, and shot, their bodies, as well as those of the Archbishop of Paris and five other priests similarly massacred, being thrown into a huge pit with a quantity of quicklime over them. From the Père la Chaise the Communists sent shells into the city, which caused an infinity of mischief, receiving meanwhile a heavy fire from Montmartre, doing extensive damage to the tombs, which the Communists meanwhile used as temporary dwelling houses. They built strong breastworks against the Versailles, and all efforts to dislodge them seemed useless, but one night the troops marched completely around the cemetery, and, next morning, driving them into their own breastworks, killed almost every Communist before they could get over, thus ending the Commune of 1871. And thus ends the present letter. W. J. J.

The Gossip Trap—A Story of the Phonograph.

I was now, however, called to the supper table. After supper there was some music and dancing, but as I believe in a party breaking up early, before bodily weariness begins to dull the keenness of enjoyment, our guests were all ready for leave-taking before midnight. Just before their departure I assembled them together in the drawing room and addressed them as follows:

"Ladies and Gentlemen: I wish just before you go to show you a curious instrument which some of you may have heard about; I mean the phonograph. If you place it beside you when you are speaking, it will record all you say and actually repeat it again to you at any time you like in your own identical voice. If there is any gossip going on between two old parties, it may be secretly taken down by the phonograph." [Here several elderly ladies exclaimed "Good gracious!"] "Or if there be any love-making on hand between two young folks, it can all be faithfully recorded by the phonograph for the perpetual delight of the lovers." [Here several young ladies giggled.]

"Now, in order to show you all this, I have had this phonograph that I have on the table here placed in the drawing room all the evening, so that all the snatches of conversation which came within its range of hearing are at this moment printed upon it, and I am now going, for your amusement, to make it speak them all over again."

There was a momentary pause after these words, followed by a clatter of talk and laughter. I observed more than one face blanch with something like consternation at my announcement. Dubbins grew white and Mrs. Jones grew red, but the majority of the guests were vastly amused, and the Hon. Evelyn Vavasour, towering conspicuously in his eye-glass, affirmed that the idea was "doosid good—doosid funny, you know."

I requested complete silence, and then started the machine. The rehearsal began as before with the small, squeaky voice of Dubbins: "Well, Mrs. Jones, what do you think of all this grandeur?" and Mrs. Jones' reply, "Mere ostentation—mere vulgar ostentation."

This time it was Dubbins' face that reddened, and Mrs. Jones grew scarlet. I felt that many eyes were turned upon me in well-founded astonishment, but I did not move a muscle and kept calm and cool. The silence had become so intense that one might have heard a pin drop. The incorrigible instrument talked on and the ungrateful gossip came forth word for word. But over the cracked voice of Dubbins could be heard from the phonograph a second faint sound which I had failed in my excitement to notice before, like an echo of distant music. I recognized it as the sweet voice of Mary, who had been singing a song in the drawing room while Dubbins was talking.

"Now look at me," went on Dubbins as before, "I've struggled hard in life, but I am still a poor man, yet Muggles and I began life together; and, though I say it myself, I was once instrumental in saving him from ruin, for you know Muggles was at one time—well, not so steady as he has become since. But we will not speak of that here—some other time, you know. We began life together, I was saying, in the same way and with equal chances. Everything seemed to prosper with him—everything he touched turned to gold, but I could only make an honest living. There's something queer about it, Mrs. Jones. The fact is there's some jobbery here."

There was fell silence for a single instant after the voice of Dubbins ceased, but the next moment the phonograph burst forth in my indignant voice, "It's a falsehood, sir, every word of it!"

There was an involuntary murmur of applause. I was startled myself, for I had not expected this. I had forgotten that my exclamation made in private while the phonograph was working had been taken down by it, and would, as a matter of course, be reproduced. The exclamation was so sudden and life-like that I think nearly every one thought that I myself had spoken. I preserved my composure, and every eye was now fixed on Dubbins. At my ejaculation he had winced perceptibly, and he now slunk away out of the room without saying a word. Mrs. Jones, who was unusually flurried, swept out after him, followed by her husband, in whose eye I thought I could detect an amused twinkle.

"Haw, Haw," cried Vavasour, "doosid good, by Jove, doosid funny."

But soon the phonograph began to talk again, and in the voice of the Hon. Evelyn himself.

"Sit down here, Fwopper," it said, "and let us have a talk."

"I envy you your choice, Vavasour," said Captain Flopper. "Miss Mary is positively charming to-night."

"Fine house—only child—lots of money—eh, Fwopper?"

"You're no fool, Vavasour," replied the Captain.

"Allow me, my boy—but you know there are great sacrifices on my side. I have to take the cross with the gold, you know. Mary herself is charming, of course, but old Muggles, for instance, and old mother Muggles. Muggles! what a name! Why, Fwopper, I deserve a fortune merely for turning an atrocious name like Muggles into Wawasour."

"Ha! Ha! Ha!" laughed Captain Flopper.

At this juncture we began to hear another musical echo coming faintly from the phonograph. It proved to be the singing and playing of an accomplished Italian musician, Signor Trombalini, whom I had engaged for the occasion.

"What a wow that fellow is making—that Signor Tambourini, or Bombazini, or whatever his name is," continued the voice of Vavasour; "a fellow can hardly hear himself speak. As I was saying, Mary is all right—good form and all that, but old Muggles, you know, the leather seller. Why, every fellow is saying to me already, 'Nothing like leather, Wawasour, nothing like leather.'"

A half-suppressed laugh burst from the assembled guests, and every face was turned upon Vavasour. He deliberately lowered the glass from his eye, turned coolly on his heel, and said as he left the room:

"Haw! Haw! Doosid good, by Jove, doosid funny. Come on, Fwopper."

Captain Flopper followed, and the laugh became general.

I now announced that the exhibition was closed. As it had progressed, the first surprise at the wonderful parody of speech had soon given place to a deep interest. Now that it was ended, I thought I could see a feeling of relief on one or two faces, but on the whole the utmost good humor prevailed, and more than one guest shook my hand on parting at the door, with what I felt to be an unusual degree of warmth and kindness.

I saw all the guests depart except Clarence King, whom I asked to remain behind. I then showed him back to the drawing room, and brought in Mary. We three were quite alone there. The phonograph still stood on the table where it had been left.

"The rest of what the phonograph has to say is a private matter for our ears alone," I said to Mr. King and Mary, who stood together before me, both beginning to look like truant school children arraigned before some offended pedagogue. For my part, I was both offended and hurt with the words, few as they were, which the phonograph now began to reveal.

"You sang enchantingly to-night, Miss Mary," said the voice of Clarence King.

"Did Mr. King think so?" replied Mary somewhat archly.

"He did."

There was a short pause, then the voice of Clarence King continued.

"And, pardon an artist, Miss Mary, but you were simply lovely—a vision of beauty."

"Did Mr. King really think so?"

"He did."

There was another short pause here, then Clarence King spoke again.

"Miss Mary," he said, and his voice was more serious this time, "Miss Mary, am I deceived in thinking that you are quite indifferent to me, and that the love I have long felt for you is met by no tenderness on your part? It seems impossible that it can be so, and for all that I know it may be so. I must tell you now that I love you deeply. I have loved you since I first set eyes upon you. Will you say, or even hint, that my love is returned?"

Here the phonograph record suddenly came to an end, like the chapter of a serial tale. The clock-work had run down.

I turned to Mr. King and demanded:

"Well, sir, and what have you to say to this?"

There was no reply. I turned to Mary, who hung down her head and blushed. "And what have you to say to it, Miss?" I asked of her.

She was also silent.

"Come, come, Mary," I said, "what did you reply to this gentleman's question?" Mary raised her head.

"I said that it was, papa—I said that his love was returned."

She spoke so softly that I could not find a harsh word to reply. My wrath was fast evaporating.

"This is a cruel night," I said, and my voice trembled in spite of myself. Mary came quickly to my side and twined her arm lovingly in mine, saying at the same time:

"Forgive us, papa."

I knew of nothing that could be said against Clarence King, and I liked him well enough from what I had seen of him. He and Mary were unfeignedly in love with each other, and I wished above all that she should be happy. So I kissed her on the forehead, and held out my hand to the young man, who shook it gratefully.

When he was about to take his departure, he begged the phonograph from me with Mary's words upon it. He said he was going soon to paint a large picture in the Highlands of Scotland, and wished to have the happiness of hearing her voice speak to him when he could no longer listen to herself.

I refused at first, for I had an idea of treasuring up the record of this memorable night myself, but Mary said:

"Don't keep it, papa; it will only trouble you unnecessarily and make you harbor a grudge," so I gave the lover the instrument and the part of the record which concerned him, then threw the remainder of it into the fire.

An old man may be permitted to draw his moral, and I may say that I think it is well that we do not generally know even the things our best friends say of us when we are absent; for their disparagement might pain us keenly, and their praise might make us vain. It is lucky, therefore, that there are practical limitations to the employment of the phonograph, which will seriously interfere with its universal adoption as a gossip trap. J. MUNRO.

LONDON, ENGLAND, July, 1878.

The Leather Medal Claimed by Los Angeles.

Notwithstanding Samson's defence—under the title of "Plugmania"—of his original proposition that "California's Leather Medal" belongs to Werner, we are compelled to protest against this stubborn and unjust discrimination in favor of the east while we have so many really deserving aspirants at home.

In our estimation it requires something more than being "the discoverer of a permanent cure for telegrapher's consumption," as well as something in addition to being afflicted with "plugmania," to render a man eligible for the honors to be conferred by the proposed decoration. The recipient of the medal should undoubtedly be an official notorious for additions to the science of "Western Union Economy," such as will make the authors of the "slush fund," "salary grade," etc., look to their laurels.

We have a host of expectant candidates among the "ponderous and highly original" officials of the Pacific Division, but the following are the most prominent, viz: Messrs. Ah Jay Gee, Wok Eff Jay, Hing De Cay, Ah Dee and Fook Gee Queue. Each of the above possess special qualifications which

pre-eminently distinguish them over all other competitors, such as levying fines on operators who unfortunately neglect to cross off a number, charging operators half rates on all office messages sent to correct missing numbers, etc. After a careful examination of their respective merits, it has been decided that the medal unquestionably belongs to Fook Gee Queue, (who, by the way, is the manager of the Los Angeles office), on the ground that he has greatly outstripped his superiors in point of economy. In the first place he has secured the services of an operator without expense to the company, not a pluging base enough to resort to such subterfuges as "cust" or "brass band" to cover up breaks, but one capable of satisfactorily working any wire in the office.

He was ostensibly engaged to handle the five A. M. signals, for which service the Government allows ten or fifteen dollars a month, but by some hocus pocus he seems compelled to make himself useful nearly all day. For this latter service he receives nothing per month.

Secondly, Fook Gee Queue discovered the important fact that by locking his lucifer matches up in a burglar proof safe of the most approved pattern, (requiring 313 combinations to unlock it), the operators could be prevented from wasting them.

Inasmuch as Werner has already signified his willingness to forego the honor, and in the face of such unmistakably superior merit, we sincerely hope that Samson will do the generous thing and see that the medal is given to Los Angeles.

NIL DESPERANDUM.

San Francisco, July 21st, 1878.

How an Abused Plug Outwitted a First-class Man.

At one of the wires extending toward the "Sweet Sunny South," in that palatial edifice 197 Broadway sits James C—, a gentleman distinguished alike for his ability in guying the unsophisticated, and the magnificence of his chirography. Numerous have been the "viffs" devised by the boys for the purpose of entrapping the wary James, but with one exception they have resulted in failure.

While working a "way" wire last summer running into the coal regions of Pennsylvania, James was asked by one of the "plumes" infesting the line, to contribute a specimen of his copperplate to the latter's collection of "copies," to which he agreed, provided the rustic would pay the postage. In the confiding innocence of his heart, the rural artist forwarded to James a three cent stamp which the latter proceeded to invest, together with two cents borrowed from a fellow operator, in a "schooner," after which he sailed down Broadway with a complacent smile illumining his features, as he thought of the manner in which he had fooled the credulous rustic. He related the circumstance to an admiring circle of friends, and for some time thereafter whenever any of those gentlemen had business (and often when they had none) upon the plug's wire, they were wont to amuse themselves at the latter's expense by making facetious allusions to "that copy."

Naturally these remarks awakened vengeful feelings in the breast of the much abused plug, and he resolved to obtain possession of that copy, or perish in the attempt. For months he did not mention the subject to James, and the latter supposed the matter forgotten. In the meantime the plume had enlisted the assistance of Tom L—, the regular New York man, and together they concocted a little plot for entrapping the festive James. One day recently Tom having notified the plume of his intention, requested Jim to mind his desk for a few minutes. On one of the hooks was a message for the plug's office. James sealed himself, and sent it. It was received by the plug, who signed a fictitious signature, and then inquired if Tom L. was there.

"Not now, but he will be soon," replied the unsuspecting James.

"Please take this for him," said the plume, and he went ahead and sent a bogus message addressed to Tom, who returned before James had finished copying it, and as he gazed over the latter's shoulder could hardly resist laughing. The copy enclosed in a neat frame, now ornaments the wall of the plume's office, who gazes upon it with renewed faith in the adage that "patience and perseverance will accomplish much." When Jim was informed how he had been taken in, he hastened to request Tom and the plume not to make the matter known, but, nevertheless, it reached the ears of your correspondent, who presents it therewith to the readers of THE OPERATOR.

N. M.

Look Out for this "Superintendent."

A man representing himself to be a Western Union Superintendent made his debut in Oneco, Conn., a small station on the H. P. & F. R. R., on the morning of Saturday last, August 3d. He told the manager of the Western Union office that he was there for the purpose of building a new line from Boston to New York for the benefit of the merchants of the two cities. He was well posted among the telegraph officials and employes in general, was well dressed, and in appearance a gentleman of some culture. He used very nice language, and was well versed in Webster's Unabridged. He induced the manager to find board for him at some house for a few days, and also engaged board for five other men, who were to arrive on the following Monday to commence work on the new line. He also said that there would be a car load of wire, and gave instructions to the manager to be sure and have it put in the freight house out of reach of thieves. Next he was seen in a tontorial establishment making his toilet for his evening promenade. After being relieved of his week's standing beard, he made the sudden discovery that he was very short of change, and had nothing less than a check for three hundred dollars. But he said that his five employes which he expected Monday would come there and be shaved also, and would have loose change and settle his account. He then went to the boarding-house, where he enjoyed a good supper and a good night's rest.

The following morning he arose early and had a hearty breakfast, then took a stroll through the village, arriving home just in season for dinner. After dining he suddenly left for parts unknown, leaving his bills unpaid. No car load of wire has yet arrived, and the mysterious "Superintendent" has not since been heard of. If this should happen to come under his observation, the citizens of Oneco extend to him an open invitation to call again, and they will use him well. He is most likely a poor tramp of an operator, traveling around the Eastern States to wait for the fall campaign, when most likely he will enlist in the Kearney-Butler cause. J. G.

NORWICH, CONN.

Effects of Electricity on Vegetation.

Probably every one who has entered a wood or a forest, has noticed the stunted or scraggy growth of the underwood, and the cause of that peculiar condition has always been attributed to the fact that the shrubs or smaller trees were overshadowed by the foliage of the larger ones and deprived of the light and air necessary to their full development. M. Grandean, Professor of the Ecole Forestière, states that his researches on the subject led him to the conclusion that, although a certain effect was to be attributed to that cause, it was not sufficient to account for the great depreciation in the vegetation. After long reflection he came to the conclusion that the large trees acted as conductors of electricity, and thus deprived the undergrowth of an element necessary to their full development. In order to test his views he tried a series of experiments on various plants, but we need only refer to one, which, although not the most striking, will fully elucidate the principle he advances, the means he employed, and the results obtained. In April, 1877, he took two tobacco-plants, each weighing 3½ grammes and having four leaves. They were both planted in boxes containing mold of identical quality, and placed side by side in a position favorable to their growth. But one of them had placed over it a cage, consisting of four iron rods 1 metre 50 centimetres high, joined at the top and covered with wire gauze, which permitted the free circulation of air, light, and water, but completely protected the plant from the action of atmospheric electricity. They were left undisturbed until the middle of August, when the results obtained were as follows: The plant in the open air had attained a height of 3 feet 5 inches, while the other was only 2 feet 4 inches; the former weighed 273 grammes, and the latter 140 grammes; when dried their respective weights were 30 grammes and 15½ grammes. Similar experiments made with maize and wheat gave precisely analogous results, so that M. Grandean has come to the conclusion that the electricity of the atmosphere is equally necessary to vegetation as sunlight, air, and water.—*Galignani's Messenger, Paris.*

A CABLE TO THE CAPE.—A bill has passed the second reading in the British Parliament providing for the payment of an annual subsidy to any Company who will construct an electric telegraph connecting the colony with England.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

August 15th, 1878.

WESTERN UNION stock has fallen in price somewhat since last issue. It is now selling at 89½.

THE awards of the Paris Exposition to Americans have not yet been published, but it is known that among the successful exhibits is Edison's telephone.

THE conclusion of "Telegraph Line Repairing," taken from Mr. Clippinger's new book "Sam Johnson," will be found in this issue, as will also the remaining portion of Mr. Munro's "Gossip Trap."

AS WILL be seen from advertisement in this issue, Mr. Day K. Smith's *Railway Enterprise* has been consolidated with Mr. John McElroy's *Railroader*—a very spicy and ably conducted railroad newspaper by the way—and will hereafter be published at Toledo. Send for specimen copy of the *Railroader and Railway Enterprise*.

THE Associated Press, in relieving Mr. Lawrence A. Gobright of the active duties as their representative at Washington, continued his salary. This plan of lessening an old servant's labors, without altogether dropping him from the pay-roll, is one which might well be imitated by other corporations.

MESSRS. JEROME REDDING & Co., of Boston, advertise their Improved Learners' Outfits in this issue. This is a responsible and old-established firm, with an excellent reputation for superior goods at reasonable prices. Send for their catalogue. Mr. Huddleston, of Callaghan's, Va., also advertises visiting cards and other printing cheap.

IN answer to many requests for a visiting card with a sounder or key in tint behind the name, we have had engraved on wood, and electrotyped especially to our order, a miniature Western Union curved key, latest pattern, and also a sounder, to be used for this purpose, and are now prepared to print cards of this description for 30 cents a pack of fifty. See advertisement, page 11.

OF the rules and regulations issued to the telegraph employes of the Galveston, Harrisburg, and San Antonio Railway, No. 7 reads: "No operator will be permitted to allow students in his office, or to teach the art of telegraphy to any one, without having first obtained the written consent of both the superintendent and master of transportation. * * * " Would that every train dispatcher in America would make a similar order and strictly carry it out. Operators interested in breaking up the pernicious practice of teaching so many students, might draw the attention of superintendents and train dispatchers to the matter, and suggest to them the necessity of imitating the G., H. & S. A. road in this respect.

The Enemy's First Gun.

Mr. O. H.—which probably signifies On Hand—Booth, Superintendent of Telegraph of the Pennsylvania Railroad, seems to have read that little Dix episode of the late civil war. At all events, he tries to imitate the Governor, and demonstrate what a zealous official he is by issuing an order that if any telegrapher who has the misfortune to work under his starvation producing company, which pays its operators the munificent salary of twenty-five dollars a month, dares to join a protective association, dismiss him on the spot. Here is his order, communicated to the craft through the junior superintendent in Xenia:

OFFICE SPT. TELEGRAPH PENN. R. R.,
MANSFIELD, Ohio, July 22.

A. T. LEE, Supt. Little Miami Div., Xenia, O.
DEAR SIR—I notice that an effort is being made under the supervision of W. J. Johnston, publisher of THE OPERATOR, to revive the Telegraphers' Union, which worked so disastrously to the interests of operators a few years ago. I wish you to notify all of our employes under your charge, distinctly and firmly, that the connection of any operator or repairer in our service with this or any similar organization, will result in their immediate dismissal. I further desire that you shall give the matter of this proposed resuscitation of a vicious organization your watchful attention, and carry out fully the policy above indicated. Very truly yours, O. H. BOOTH.

XENIA, OHIO, July 24.

ALL OPERATORS, L. M. Div.

GENTLEMEN—The enclosed copy of a letter just received from Mr. Booth is sent you for your information and guidance. I trust your good sense will prevent any necessity for further action on my part in regard to the matter. Very truly,

A. T. LEE.

Who instructed Mr. Booth to issue such an order? Surely he wouldn't dare to do it on his own responsibility. If he has, we can assure him that he has committed a very grave blunder. There is nothing in the world wanting to start a successful organization but a little opposition from the Western Union Company. If superintendents would only make an energetic effort to crush it, there is nothing would give the friends of the scheme greater satisfaction. For Mr. Booth's advertisement of the proposed protective association, as well as of THE OPERATOR, he has our sincere thanks. Many men who have never hitherto heard of either, now write for information and particulars, and if his mandate has no other effect, it will be likely, at least, to add to our list of subscribers, and to the number of those favoring a protective association. We wish that some of the other superintendents would oblige by issuing similar warnings to their subordinates. They will have the satisfaction of knowing that they are aiding a good cause, and a praiseworthy newspaper.

Whether Mr. Booth is acting under instructions in issuing this order, or does it on his own responsibility, hoping thereby to attract attention at headquarters, we venture to say that, biased as his position makes him, he believes, if he would only acknowledge it, that there is nothing that operators stand so much in need of at the present time as a protective association such as the one proposed—for the purpose of mutual protection; of regulating the admission of students into the business; of ridding the service of the incompetent, drunken, tramp operators who are disgracing it; and of being able to go to employers and say: we represent so many operators, we desire such and such things done, but don't want to strike or create any trouble, and so have come to

talk the matter over calmly, and see what is best to be done in the premises.

That is the kind of an organization that operators want, and we have yet to meet the first telegrapher, officer or employé, who disapproves of it in that form. All that anybody objects to is a strike; but if there be a strike at all it will be caused by the Western Union, and not by the operators. We believe the members should be in a position to successfully engage in a strike should one be precipitated, and if they show themselves to be, the company will not want any strikes. Here is the objection of a Massachusetts manager to a strike:

I believe there is no class of workers so well able to protect themselves, or to dictate to their employers as telegraph operators, but after my experience as one of the members of "Circuit No. 1, T. P. L.," I have no faith to advocate another "union." I cannot therefore be counted for the proposed union, nor will I say anything against it, but you may count me as a subscriber to THE OPERATOR, for which I inclose one year's subscription.

This gentleman falls into precisely the same error that many others seem to have done. Because the first combination led to a strike, and that strike went against operators, is no reason why there should be another strike, or, in the event of a strike, why it might not be a success. The company, believing it could break up the combination, took the League by surprise, and precipitated a strike when one was least expected. The League, unprepared as it was, was defeated and crushed. But are we to lose faith in a scheme because a first attempt has not been a success? If we had, where would the Atlantic cable be to-day? Where would so many gigantic enterprises be that only proved successful after failure had brought down the ridicule of the world upon them? In fact, where would the telegraph itself be? Morse, on one occasion, discouraged and disgusted by the lack of interest displayed by the public in his scheme, which has since proved so important an agent of modern times, remarked to a friend that he would gladly avail himself of any divine interposition for the purpose of ridding himself of a life of which the possessor had grown weary. Oh, no, because the first strike was not a success is no reason why a second one might not be. However, we should deprecate a strike. Little good can come of it, but, as we said before, if operators can only become strong enough to sustain a strike, the company will not give them any occasion for one.

Electrical Photographs of a Vessel Blown Up by Torpedoes.

A very successful experiment of blowing up an abandoned hulk with torpedoes took place at Willett's Point, near this city, August 7th. General Abbott, commander of the Government station, desiring photographic views of the effects of torpedo explosions at various depths, singly and in combination, torpedoes were electrically fired by means of keys in the observatory and laboratory, while along the shore at the point were arranged electrical cameras, with electric chronometric attachments. These were so arranged that the prepared plates could be dropped instantaneously by electric fuses, and when dropped would register by the chronometric attachment the exact time the photographs were taken. Various photographs of the single torpedo experiments were taken, so that the form of the jets cast up by the

explosions at different depths might be clearly seen.

The grand experiment of the day, however, was tried in the afternoon, when Gen. Abbott obtained one of the most valuable photographs—that of the appearance of a vessel at the moment it is being blown up by a submerged torpedo. This feat has never hitherto been successfully accomplished. The General has employed for some time in his experiments a 100-ton schooner called the Royal George, which had become useless for such service, and was at length sacrificed in the cause which it had so long served.

About noon four photographic instruments, a small but very fine and scientific clock, an electric battery, and all the machinery necessary for a telegraph office, were put in position at the end of the pier. There were also two small beer kegs, coated outside with pitch, and a large coil of submarine cable. The kegs, each of which contained 50 pounds of powder, were taken out near the vessel in a row-boat, and both sunk—one about 20 feet from the vessel's bow, the other as far from her stern. They were connected with the cable, the boat got out of the way, and the torpedoes were fired, one at a time, by the simple telegraph key on the pier. Each of them sent a column of water into the air about 50 feet high, which immediately relapsed into nothingness; but no damage was done to the schooner. Then two more torpedoes were sent out and connected with the cable at about the same distances from the schooner as before. These were fired simultaneously, with the same result as to churning and hoisting the water, but again without injuring the vessel.

The very simple electrical apparatus for taking photographs of moving bodies was put in order. The four photographic instruments were put in line, each pointing at the fated schooner. Over them was a light wooden framework, from which were suspended four light boards, like shingles, so arranged that when they dropped they covered the tube. These were suspended by light cotton threads, which in turn were fastened to light fuses, which connected with the telegraph wires. When the circuit was made, the electric spark ignited the fuse, the fuse burned the thread, and, in a second or so, the board fell before the lens, and the negative was made.

The Royal George had all her sails hoisted except her jibs. She was to be photographed in the highest style of marine art, sailing along over a deep blue sea.

The two kegs of powder were fastened to the schooner's bottom, dropping down about three feet. The water was far too deep (about 85 feet) to anchor them on the bottom. They were put as near the centre of the ship's bottom as possible. When all was ready, Gen. Abbott pressed two fingers upon the key. There was a loud booming noise, seemingly under the vessel, and a little smoke. Presently a quantity of water, about twenty feet high, was raised up out of the Sound. Then the Royal George was seen sixty feet in the air, rising high above the smoke and the water, in ten thousand pieces, each piece a mere splinter, a piece of kindling wood, the pieces revolving, and striking against each other in the air. Finally there was the descent of the debris, not so rapid as the ascent, the whole mass coming down together with a crash on the water. This caused a little ripple, the smoke died away, the pieces floated along, and everything was calm again.

All this time, which was about the time occupied in winking twice, electricity and the sun had been working together, and had photographed the scene. A hundred small boats flew to the scene of the wreck, and hundreds of the small pieces were picked up for relics. It would have puzzled anybody to find a square foot of either sail or masts. Gen. Abbott was fully satisfied with the result, and four excellent negatives were obtained.

PROF. BELL has encountered a formidable and unexpected obstacle in his efforts to introduce the telephone in England on a plan similar to that adopted in this country, of putting up the apparatus and renting instruments. After considerable expense had been incurred, and a company formed to carry on the business, a bill was introduced in Parliament, and is now pending, providing "that in the construction of the Telegraph Act, 1869, the term telegraph shall, in addition to the meaning assigned to it by the act, include any apparatus for transmitting messages or other communications with the aid of electricity, magnetism, or any other like agency." This would bring the telephone under the Government monopoly, and prevent any profitable use of it by private parties. Prof. Graham has not only made his protest in the London papers, but a deputation, including himself and others, in the interest of the Telephone Company and the general principle involved, waited on Lord John Manners, head of the Post-office Department, to urge their objection to the pending bill. They did not obtain much encouragement, and it looks very much as though the use of the telephone in England would be "gobbled up" by the Government, which, under the act of 1869, took possession of all the telegraph lines, at an expense of \$5,000,000.

MR. J. S. McCLELLAND, of the Montreal telegraph office, St. Catharines, Ont., sends us the preface to Dickens' "Oliver Twist," written in precisely half the space occupied by Mr. Davis, as recorded in last issue of THE OPERATOR. After finishing the preface, Mr. McClelland continued with Werner's reply to Samson, and succeeded in getting down the remarkable number of 1575 words in a space of 15½ square inches. This is exactly 100 words to the inch, while the writing though fine, is perfectly legible. Every word can be distinctly read. Is the Dominion thus to carry off the honors for fine writing, when so many in "the States" have been flattering themselves that they were "some" in that respect? Surely not. Mr. A. D. Thompson, 2d, of Oswego, N. Y., sends us 1148 words written within a space of 4 13-16ths by 4 9-16ths inches. This is very good, but does not come up to Mr. McClelland.

We have already received many advance orders for copies of Mr. Clippinger's new book, "Sam Johnson; the Observations and Experience of a Railroad Telegraph Operator." The book will be ready and all orders received filled before the next issue of THE OPERATOR. Those desiring copies can now order at once. Read carefully the extraordinary low club rates at the end of the advertisement of the book on page 2. Great saving is made when THE OPERATOR or some of the other books are ordered in connection with "Sam Johnson."

Themes for the Thoughtful.

Boasters are cousins to liars.
 Foolish fear doubles danger.
 Idleness is the greatest prodigality.
 A good cause makes a stout heart.
 Candid thoughts are always valuable.
 One to-day is worth two to-morrows.
 The sleeping fox catches no poultry.
 Blunt people often say sharp things.
 Strong reasons make strong action.
 Progress is born of doubt and anxiety.
 A wounded reputation is seldom cured.
 That man is rich whose desires are poor.
 Hope is a good breakfast but a bad supper.
 All is but lip wisdom that wants experience.
 Whoever conquers indolence can conquer most things.
 He who can take advice is sometimes superior to him who gives it.
 What's done we partly may compute; but know not what's resisted.
 There is always room for a man of force and he makes room for many.
 In idle wishes fools supinely stay; be there a will, and wisdom finds a way.
 Motives are like harlequins; there is always a second dress beneath the first.
 Few men have a life plan, although many a week, year, youth, or business plan.
 Modesty in your discourse will give a luster to truth, and an excuse to your error.
 We should do well to take counsel from the wise and warning from the foolish.
 To be in passion is to punish one's self for the faults and impertinences of the other.
 When the character of any one is discussed, silence in the good-natured is censure.
 The hardest trial of the heart is to attempt to bear a rival's failure without weak triumph.
 In the pursuit of virtue exercise gives strength. The more we advance the less fatigued we are.
 When society begins to profit by a man's misfortunes, his difficulties do not soon terminate.
 How immensely would conversation be abridged if all mankind would speak only the truth.
 The rich man despises those who flatter him too much, and hates those who do not flatter him at all.
 The tallest trees are most in the power of the winds, and ambitious men of the cyclones of failure, disaster and business reverses.
 How many amusing and ridiculous scenes should we witness if each pair of men that secretly laugh at each other were to do it openly!
 There is no union between the thoughts, the words and actions of the wicked; but the thoughts, words and actions of the good all agree.
 This is the law of benefits between men: the one ought to forget at once what he has given, and the other ought never to forget what he has received.
 Man, being essentially active, must find in activity his joy, as well as his beauty and glory, and labor, like everything else that is good, is its own reward.
 Affliction makes a divorce between the soul and sin. It is not a small thing that will work sin out of the soul. It must be the spirit of burning affliction sanctified.
 He that does good to another man also does it to himself, not only in the consequence, but in the very act of doing it, for the consciousness of well doing is an ample reward.
 There is hardly any bodily blemish which a winning behavior will not conceal or make tolerable; and there is no eternal grace which ill-nature or affectation will not deform.
 The great highroad of human welfare lies along the old highway of steadfast well-doing, and they who are the most persistent, and work in the truest spirit, will invariably be the most successful; success treads on the heels of every right effort.

Sad Hayoc by Lightning.

Usually there are not more than from fifteen to twenty persons killed by lightning in any one year in this country. During the present summer, however, the number of deaths, as well as the destruction of property from this cause, has been unprecedented.

At Albany, N. Y., August 2d, lightning struck one building, glancing off, and setting fire to another. At Holly Springs, Miss., same day, a young man aged sixteen and a young woman of fourteen were killed. Several houses were struck by lightning at Washington, August 5th, and on the same day, the lightning struck the Methodist Church in Wapping, a few miles from Hartford, Conn., while the service was in progress, and three ladies in the congregation were prostrated by it. One, a daughter of Samuel O. Belcher, had the hair torn off the back of her head, and the fluid scorched her back, and burned one shoe to a crisp, but she was feeling comfortable next day. The shock rendered another lady insensible, and she had not recovered consciousness at last accounts. The third person struck was not much harmed.

Levi Barker was seated on a fence near Fetterman, West Va., last Saturday evening, when the lightning struck a tree close by him. The electricity rebounded from the tree when about halfway down and struck the young man on the head, instantly killing him. There was only one mark of the electricity on him, and that was a slight burn on his hair, yet every bone in his body appeared to have been broken.

James Haley was killed by lightning at Grassy Point, two and a half miles from Haverstraw. The barn of Theodore Coc was struck by lightning, and totally destroyed with a large quantity of hay and oats. These occurred on August 5th.

Much damage to property and some loss of life was occasioned in various localities by the storm of August 8th, which was particularly severe throughout portions of New England. At Malden, Conn., a lady was struck by lightning, and killed. At Woburn, Mass., Josiah Leathe, station master, was killed. Two ladies were also struck and severely injured. At Gloucester the schooner Maud Muller was struck by lightning, her mainmast shattered, and other damage done. Three of the crew were prostrated, one not recovering for some hours. At Haverhill, fences, trees, and chimneys were blown down, and much damage is reported. The pumping station of the Silver Hill Aqueduct Company was completely demolished. At Newburyport many large shade trees were prostrated by the lightning.

At Newbury two men were struck and seriously injured. At Fitchburg thirteen houses and barns were struck and some animals killed. No persons were seriously hurt. At Lawrence, Andover, and Lowell many buildings were struck and much damage done. At Manchester, N. H., several houses were struck, and one or two persons injured. At Portsmouth a schooner was struck off Boon Island, split from stem to stern, and sunk. Two men on board at the time were rescued by passing vessels. Four cattle were instantly killed in a pasture. At Exeter several houses and barns were struck and damaged. At Stratham three barns were struck and burned, together with all the contents. At Milford much damage was done to trees, crops, fences, etc. A barn was struck and consumed, together with the stock of farm implements. From Keene and several other points in the State more or less damage is reported. At Clarendon, Vt., a barn was burned, with fifty tons of hay, and a quantity of grain and live stock. At South Royalton, Vt., the large barn of Norman Sewell, with forty tons of hay and live stock, was burned.

At Cape Vincent, N. Y., lightning struck two churches, the depot, and a dwelling, as well as a barn. The dwelling caught fire, but the flames were extinguished. The barn, filled with grain, was consumed. The telegraph lines in the vicinity were all prostrated, and no trains arrived all day.

Damage to the extent of about \$5,000 was done by lightning in the neighborhood of Newburgh, N. Y. Houses, barns, outbuildings, and outlying grain were destroyed at Bellville, Ont. In the city three houses were also struck by lightning, and considerably damaged.

In the near future, the bore, instead of carrying an autograph album, will have a phonograph concealed upon his person, which he will produce at the unhappy moment and request his victim to shoot a few words into it to remember him by.—*Oil City Derrick.*

Scientific American Answers to Correspondents.

G. M. L. asks: Why is it necessary to use carbon points in electric lights? A. It is the only substance yet discovered which will produce the effect.

W. J. P. writes: I want to drive a machine shop 1,200 feet from a boiler and engine. Which is the best and cheapest way to transmit my power? A. Use an endless wire cable.

J. B. writes: I have a Smee battery with one cell. Can I nickelplate with it? and if so, please inform me how. A. Use a solution of chloride of nickel and ammonia made by dissolving 4 ozs. of the salt in 1 gallon of water.

J. C. W. asks: Would an iron railing or cresting on the roof of a building increase the danger from lightning? A. No. The iron railing would assist in protecting the building if it were connected with a rod well grounded in the earth.

F. W. R. writes: What should be the resistance of the magnet wire of an electric engine, that is to be driven by the electric current, produced by a magneto electric machine? A. The resistance of the magnet wire of each instrument should be about equal.

W. S. A. asks: 1. Whether the coil for a telephone or an electro-magnet must be wound evenly in parallel layers, or would it do as well if wound haphazard, or in any way approximating to layers? A. The coil should be wound evenly. Must the two magnets of a pair of telephones be of equal strength? A. The results are better when the two magnets are of equal strength.

E. D. S. asks: 1. How is the signal bell on the telephone worked without a battery? A. With a small magneto electric machine. 2. How can I make something of the kind, or to answer the purpose? A. An alarm cannot be easily made. 3. What is the size of the inclosed wire, and will it answer to construct a telephone line a half mile long? A. The wire is No. 16. It will answer, but larger would be better.

C. R. P. writes: By leaving the key of a telegraph instrument open, thus breaking the circuit, does the liquid in the battery cease to operate on the amalgamated zinc? A. The battery fluid does not entirely cease to act on the zinc and mercury. These metals would in time be gradually dissolved, even if the electric circuit were kept open. It would then be said that the "negative" was dissolved by "local action."

E. W. W. asks: 1. To make an electro-magnet capable of holding 1,000 pounds, what should be the gauge and length of wire? A. About 50 pounds of No. 12 copper wire, cotton insulation. 2. What diameter and length of arms of horseshoe core? A. 2½ inches in diameter and 15 inches long. 3. How many coils deep should the helix be? A. About 16. 4. What power Grove battery to work it up to its full strength? A. 12 or 15 cups.

B. E. writes: I have an electrical apparatus which at one moment has a strong current, and the next moment the action will almost cease. I use an induction coil with a Grove battery. What is the difficulty? A. Probably the trouble is with your battery. Clean the zinc and connections thoroughly, then charge the porous cup with strong nitric acid, and use in the jar a solution of one part of sulphuric acid in twelve parts of water. The zinc should be thoroughly amalgamated.

J. L. C. asks: 1. Would a bar magnet 9 inches long and 1 inch thick and wide act as a compass needle? A. Yes. 2. Would it still act as such if surrounded on all sides by iron? A. The attraction of the surrounding iron would destroy its accuracy of direction. 3. What power would be necessary to cause it to deviate from north and south? A. The smallest weight that could be imagined would cause a deviation. 4. Would the power necessary be increased by enlarging the magnet? A. To a certain extent.

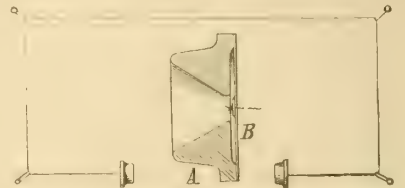
H. W. K. writes: While listening in a telephone there is a continual crackling noise, which is greatly increased in a foggy or rainy day. Is not this caused by currents of electricity in the ground (the telephone has a return circuit through the ground), and why are they more intense in damp weather than in dry? A. The crackling may be produced by earth currents. It may also proceed from currents induced in the telephone line by parallel telegraph wires.

How many cells Callaud battery will it take to melt a No. 40 copper wire? A. About 40.

H. R. asks: 1. Can you inform me how strong horseshoe or other magnets can be made? A. a. By placing on each end of a hardened steel bar a soft iron cylinder, and surrounding the whole with a helix which is connected with the poles of a powerful battery. b. By placing the hardened steel bar against the face of a strong electro-magnet. 2. Is there such a thing as an electric engine? A. Yes. See any work on physics. 3. What kind of lime is used for making the lime-light? A. A good clear piece of common unslaked lime will answer. It is sometimes prepared by calcining marble.

J. B. writes: I have a telephone line 1 mile long, with Bell's telephones at each end. Now when I speak at one end how does the sound reproduce itself at the other end? A. When a sound is made in the mouthpiece of the transmitting instrument, the diaphragm of the instrument vibrates in unison with the sound, and by approaching and receding from the magnet disturbs its normal magnetic condition and thus generates electric currents in the surrounding helix. These currents are transmitted to the helix of the receiving instrument, where they change the magnetic condition of the bar contained by the helix so that the diaphragm of the receiving instrument vibrates in exactly the same manner as that of the transmitting instrument.

P. B., W. B. P., and others.—A cheap and effective acoustic or thread telephone may be made by turning from wood a mouthpiece, A, and attaching to it a disk, B, of ferrotypic plate. The mouthpiece should be 2½ inches in its largest diameter, and should have an annular surface ¼ inch wide for receiving the disk, B, which is attached by means of sealing wax. The wax is first applied to the wood, and the disk is warmed and pressed against the mouthpiece. The disk is 2½ inches in diameter. The



portion left free to vibrate is 1½ inch in diameter. The larger internal diameter of the mouthpiece is 1½ inch, the smaller ½ inch. There is a small hole in the centre of the diaphragm for receiving the thread, which also passes through a small piece of soft rubber and is knotted. The telephone thread must be supported on small elastic bands which must be put under tension. The string must also be taut. By means of this arrangement sound may be conducted at any desired angle, the elastic rubber supports being arranged as shown at the corners of the engraving. Whispers and even breathing may be distinctly heard over a long distance. When talking loud the receiving instrument should be removed 2 inches from the ear.

What Superintendent shall have the Graduation Medal.

When it first became known that the Western Union Co., with its accustomed thoughtfulness, proposed to confer upon its employes a blessing under the guise of "gradation," many of the men, whose narrow minds and sordid souls could not appreciate the advanced humanitarian ideas of this great monopoly, added the offensive prefix "de." And when told that the superintendents who showed the greatest activity and ability in dispensing this great boon would receive "consideration at headquarters," they presumed to sneer at the efforts of these little big men, and even intimated that the "consideration" referred to would be a portion of the money which they had helped to filch from the operators. Whatever quantum of truth there might have been in this assertion in general, I wish to show that at least in one case merit has not as yet been rewarded.

Superintendent Wilson has undoubtedly done more than any other official to (de)grade his employes, and by judiciously directing his efforts for the "benefit" of his best men, has been successful in placing first-class salaries in his district at \$50 a month, thus earning the "consideration" of both employer and employe. The men have been considering him for some time, and the company now remain to be heard from. His is a case which well deserves recognition, and unless the company is as ungrateful as usual, we may soon expect to see him

suitably rewarded. But lest the company may not be induced to depart from its time-honored policy of duplicity, let us award Supt. Wilson the gradation medal; for I challenge the fraternity to produce one more worthy to receive it.

As a word to the wise is generally supposed to be sufficient, let all first-class men who contemplate taking situations under the "Medal Superintendent," before doing so, take him seriously into "consideration."

WEST.

Dashes Here and There.

The French government has established a school specially devoted to the study of telegraphy.

It is said that the Latin language gives the best results with the phonograph.

Cyprus is to be connected by means of a submarine cable with the other Mediterranean stations.

There are 220 public telephone stations in Germany exclusive of thousands of private telephone lines.

There are now over sixty-two thousand miles of submarine cable in the world, owned by eighteen companies.

Edison looks back to the days when a linen duster and a hungry stomach were all his capital, and agrees that this is a world of change.

Orders have been received here from the Chief Signal Officer for the immediate erection of a staff for the display of signals at Portsmouth, N. H. J. Dwight Randlett will have charge of the station.

It is stated that on a recent occasion 219 average messages were sent in one direction, and 139 in the other, in the space of one hour, by applying the duplex system to the Wheatstone Automatic instruments.—*London Electrician*.

La Nature reports that during a recent thunderstorm at Saint-Révérien (Nièvre) a stroke of lightning entered a dwelling house by the chimney, upsetting several dishes, and, oddly enough, boring its way through a pile of plates, missing each alternate plate. Moreover, the bolt escaped by a window, breaking the glass in pieces. A girl sitting in the doorway was paralysed in her legs by the shock.

According to Dr. Treves, exact or scientific study has a tendency to deaden and sterilize the poetic faculty. Dealing constantly with stern facts and well-defined mental processes, renders all organization in the nervous centres more perfect, promoting distinctness of ideas, a more exact method of thought, and that general structural condition which is unfavorable for the display of those mental qualities which the poet must possess.

A correspondent of the *Scientific American* gives an interesting account of a mouse that crossed from one building to another on a fire telegraph wire, over a distance of some four or five rods. Although the buildings were among the highest in Chicago, the feat was performed with perfect ease and grace. When near the observers he was frightened, when he carefully turned about and returned to the roof from which he came.

Some postal and telegraph reforms have just been carried out in Mauritius. The charge for a message of twenty words is reduced to twenty-five cents, an example which might be held up to India, where an inland message of six words costs fifty cents. An extra charge is made for messages on Sunday, a proceeding which our contemporary the *Port Louis Mercantile Record* cannot possibly understand.—*London Telegraphic Journal*.

At the sitting of the French Académie de Sciences, July 1, M. Du Moncel was desirous of communicating, on behalf of M. Baley, the representative of Mr. Elisha Gray, a note in which the latter gentleman claimed that the discovery of the speaking telephone belonged to himself, and not to Mr. Graham Bell. But, as the rules of the Académie do not allow the discussion of questions relating to patented inventions, the paper had ultimately to be withdrawn.

Mlle. Juliette Dodu is about to receive the decoration of the Legion of Honor. In 1870, as already mentioned in *THE OPERATOR*, she was at the head of the telegraph office at Pithiviers (Loiret), and at the approach of the Prussians she concealed her instrument. As soon as they had taken possession of the place, she attached the dial to the wire, intercepted their messages, which were sent to the Sub-Prefect, and by that means the safety of a body of French troops which was in great danger was secured.

Cyprus, recently acquired by England, is not in telegraphic communication with that country, though it is connected by a short cable to the neighboring shores of Asia. It is thought, however, that a cable will soon be laid to connect it with Egypt and Malta, and therefore England. Twenty non-commissioned officers and sappers of the 22d and 34th companies, Royal Engineers, were sent on board her Majesty's troop ship *Simoon*, at Plymouth, for telegraph service in Cyprus.

A terrific storm visited Washington, August 10th. The wind blew with the force of a tornado; trees were uprooted, carriages and wagons overturned in the streets, and great damage done in various parts of the city. The large plate-glass windows in front of the Western Union Telegraph office were blown in by the force of the storm, and a large piece of glass struck one of the messenger boys, named Frederick Klotz, lacerating his arms and head in a fearful manner. He received prompt medical attention.

BRITISH POST-OFFICE TELEGRAPHS.—The account of receipts and payments by the Postmaster-General in respect of the Post Office Telegraphs for the financial year ending on March 31, has just been issued. It shows that the payments amounted to £257,743, of which sum the receipts fell short to the extent of £2,492. During the year eighteen of the officers of the late telegraph companies have commuted their pensions, and £18,413 has been paid to them. Out of the sum of £9,750,000, authorized under the Telegraph Acts, the total amount available for future expenditure is £141,035.—*Electrician*.

During the eclipse of the sun, July 29th, Mr. Edison directed his attention to ascertaining, by the aid of his newly-invented tasimeter, whether the corona gave forth indications of heat. The tasimeter can be arranged so as to be exceedingly sensitive to heat radiations, so that the hand, at a distance of three or four feet, will cause a strong deflection. On this occasion he adjusted the instrument so as to be very sensitive, because we could not predict what amount of heat the corona might give forth. It turned out eventually that a much less sensitive instrument would have sufficed, because the moment the tasimeter was moved from the image of the dark moon on to the image of the corona, the index-beam of light went instantly and entirely off the scale.

From a report recently issued it appears that the number of troubles on the German telegraph lines last year was somewhat larger than usual. One hurricane put temporarily out of service nearly two-fifths of all the lines. The total number of derangements during the year was 6,198, of which 87 per cent. were country lines, 7 per cent. town lines, $1\frac{1}{2}$ per cent. cables, and $4\frac{1}{2}$ per cent. office leads. 26 per cent. were due to atmospheric influences, 15 per cent. to falling rocks, or earth slips, 3 per cent. to mischief or carelessness, 3-10 per cent. to the flight of birds against the wires, or kite strings. The remaining 54.7-10 per cent. could not be accounted for. The troubles were 1,708 broken posts, 3,284 broken wires, 4,114 damaged insulators, 2,706 broken binding wires. The system in which they occurred only comprised in the year 1876, 37,264 kilometres of line, involving 136,891 kilometres of wire.

It is interesting to note the number of important inventions due to the ingenuity of persons whose occupation lay entirely out of the line of mechanical pursuits. Whitney, who invented the cotton-gin, was a school teacher. So was Reiss, who made the first telephone; and A. Graham Bell, who perfected the telephone, was a professor in a deaf mute college. Fulton, of steamboat fame, was an artist painter, as was also Samuel F. B. Morse, Father of the Telegraph. Brindley, the greatest civil engineer in England before the present century, was totally deficient in scientific training. Arkwright, the inventor of the spinning machine, was a barber; and Cartwright, the inventor of the power-loom, was a clergyman, who had never even seen a weaver at work. Roebuck, the originator of the modern iron manufacture of England, was a physician at Birmingham—and so the list might be much extended.

PERILS OF THE TELEPHONE.—The telephone may prove a dangerous matter for some folks. One of our leading merchants, whose home is not a thousand miles from Brooklyn, and who occasionally luxuriates in his leisure hours in mechanical and philosophical experiments, put up the other day an excellent telephone at his residence, connecting the

parlor with the rear of the house. On a certain evening, while he was at work at one end of the instrument, there were a couple of young bucks being entertained in the parlor by the young ladies of the family, and one of them, whose wish may have been father to the thought, spoke—just for the fun of the thing, of course—at the instrument. The quiet old gentleman received at his end of the wire this complimentary message: "Old Mr. Watkins, isn't it most time you went to bed?" The young sauce-box in the parlor nearly jumped from the floor at the reply that came back: "Yes, sir, and quite time you went home, young man."

MEM. TO MR. EDISON.—Two centuries ago, Cyrano de Bergerac, in his "Histoire comique des estat et Empire de la Lune," wrote as follows: "My demon said to me, 'To amuse yourself, here is a book, which I will leave with you.' It was in a box, on opening which I found I know not what of metal, something like our clocks, with many little springs and imperceptible machines. Truly it is a book, but a miraculous one, without leaves or letters, to read which eyes are useless, one only having need of his ears. When one wishes to read, he attaches a great number of little nerves to this instrument, then turns the needle to the chapter he wishes to hear, and straightway there issues, as if from the mouth of a man or of a musical instrument, all the distinct and different sounds which serve these lunar folk to express their language." This original story of the phonograph will be found in the "Voyages Fantastiques de Cyrano de Bergerac," just republished at Paris by the Librairie des Bibliophiles.

Professor Dolbear has recently shown how nearly Reiss came to inventing a true speaking telephone. A drop of water inserted between the diaphragm and spring make and break contacts of Reiss' 1861 telephone, transforms it into a speaking telephone similar to Elisha Gray's. Professor Dolbear constructs a serviceable "water telephone" without the use of electro-magnetism, by using two parallel metal diaphragms fixed to a wooden ring, and forming a shallow box. The interior of this box, or space between the diaphragms, is filled with water. A battery is connected up to one diaphragm, and the other is connected to line, so that the current passes through the water, the sound waves impinging on one diaphragm oscillate the resistance of the water, and a vibratory current is transmitted. If the speaking diaphragm be of iron, and the other of zinc, a feeble current is generated in the telephone itself. This telephone only acts as a transmitter as at present constructed.

A writer, in the *London Times* suggests that the microphone and the telephone might be made to prevent colliery explosions. All who have visited a fiery mine, he says, have listened to the peculiar hissing sound given out by pores and joints in coal-seams from which gas is being evolved, varying in intensity with the quantity delivered. Could not a combination of the microphone and telephone be constructed so that these sounds emitted underground may be reproduced in the colliery office, and a permanent record be kept by means of the phonograph? This, consulted every morning by the firemen previous to their daily inspection of the mine, would indicate not only to a certain extent the quantity of gas given off, but the exact part of the mine from which it has been given off; for several 'transmitters' might be placed in each coal seam, and a separate phonograph connected with each 'receiver' in the office. Should this be found practicable, the importance of daily telegraphic exchange of results is obvious, when it is remembered that the causes leading to extensive outbursts of gas at a particular colliery are experienced over a wide area.

Speech may be elevated to a whistle by turning the phonograph recording it fast enough, and the whistle may be recorded by a second phonograph, revolving slower, so as to give out the original sound.

The following is a fact, occurring in this office:

A traveling operator called on us, and wished to get a chance to "sub." After listening to his sad story, we arranged to lay off a day or two, and give him a chance to get his hand in. He sat down to a way wire, and the first message he received was going to Texas, and read as follows: "Send one trunk red currants"—4 paid. The sending operator, in repeating it, noticed that the check was wrong, and had it repeated. It came thus: "Send one hundred currency"—4 paid. The manager concluded that we had better postpone our intended vacation. We did. It's dangerous to say "red currants" in C—'s presence.

B.

Oswego, N. Y., August 2.

Why Buildings are Struck by Lightning.

It will now be readily perceived why tall buildings, such as church spires, are more liable to be "struck," to use the common expression, than structures of a less height. Buildings may be constructed, wholly or in part, of substances possessing greater conducting power than the air, and as they rise to considerable distances above the earth's surface, they lessen by so much the thickness of the stratum of air to be traversed, and diminish in a corresponding degree the resistance to be overcome between cloud and earth. Of two edifices equally conductive, the higher will thus occasion the greater reduction of resistance, and consequently the discharge will take place directly over this building, and through it to and from the ground. The effects of the passage of electricity through the building will be determined by the degree of conductivity possessed by the latter, or, in other words, by the resistance it offers. If it be constructed of metal, or if it have a continuous piece of metal running through it from top to bottom, the electric charge will pass without causing in it any visible effect, because little or no resistance is opposed. For this reason buildings, as the reader doubtless knows, have often affixed to them for their protection a metal rod called a lightning conductor. But if there be no metal employed in the construction of the building, or if the metal used be in separate and detached pieces, there will be great resistance to be overcome, and the force required to overcome it may be sufficient to cause the destruction of the building, or at least the displacement of those parts where the resistance is greatest. The heat generated by the passage of electricity through badly conducting substances is often great enough to set combustible materials on fire.—*Chambers Journal*.

We receive from time to time a very large number of nice letters from subscribers—letters that it would give us pleasure to publish; but if we published them all, it would take up too much of our space, and might lay us open to a charge of blowing our own horn. Here, however, are three in reference to the Foster matter which we make exceptions to the rule:

Wonder if "Never Harmonious" classes himself among the "hair-brained fools," because he must read *THE OPERATOR*, else how could he know so much about it? He reminds me of a youngster just "cutting his feathers," in consequence of which he becomes "top-heavy," or silly. I would advise him to bathe his head in cool water as a remedy.

CURRENT.

Herewith please find enclosed the amount due you on my subscription to your valuable little paper. Long may you and your paper survive, and in the end reap the benefits you so richly deserve, is the wish of one of your "hair-brained fools," who is ashamed that he is in the same State with the *ass* in our sister city of Covington. Buckle on your spurs and plunge them deep into the sides of that animal, "The Protective League." You shall have our prayers. H. B. F.

I take great pleasure in forwarding you to-day three subscriptions and \$3.75 by P. O. order, and with them my hearty congratulations on the grand success your little darling is meeting with West. The "whirl" you give Foster, of Indiana, is simply immense, and among our boys it is one of the richest things out. Give it to 'em; we'll back you. W.A.S.

Echoes from 197.

Miss Walker has been transferred from the through wires to the city line depot.

Miss Nellie Shaut, from "145," is subbing for Miss Lowell, who is away on vacation.

C. A. Hurd, who subbed in the main office for Mr. Stark, has returned to Worcester, Mass.

K. S. V. Randolph, the Cooper Union Telegraph College teacher, is working on the day force.

Rupert G. Stephenson has been appointed Sunday traffic chief, *vice* Theodore F. Taylor removed.

The Misses Nunan, Whitehorn, and Ross work the Saratoga quad. Miss Minnie Hahr works the Oswego wire.

Messrs. W. H. Jackson and James E. Stark have returned from the country, feeling recuperated, and looking brown.

Miss Pike, who resigned her position in the ladies' department some time ago, died of consumption July 8th, at her home in Washington.

E. F. Welsh spends his leisure hours at New Brunswick, N. J., where he is a great favorite with the ladies. Like Joey Bagstock, he is very sly.

Fred Baldwin has returned from a month's vacation. He asserts that he spent his time in the country, twenty miles from the nearest keg of lager.

John White Kelly, an old-time telegrapher, is hunting and fishing in the Adirondacks. The latter amusement is lively, there being 250,000 musquitoes to one fish.

Mr. Peter Ritter, chief of the night elevator, displays wonderful skill of late in the handling of his intricate business. He says he was born for a politician, being a natural wire-puller.

Giles M. Howlett has charge of the Manhattan Beach office. He passes the time in tickling the tide with his toes, reporting the presence of the potato bug, and whistling the "Sweet By-and-Bye."

A tub-race is to take place at an early day on the Gowanus Canal, between Lieut.-Gov. McEnroe and Miles O'Reilly. The former gentleman is an ardent advocate of the "get there" stroke, while Mr. O'Reilly favors the "hooper-up" pull.

PERSONALS.

Bob Marsh is train dispatcher for the Denver Pacific R. R. at Denver, Col.

George Little and Johnny McNabb, of Galveston, W. U. have returned from their annual summer vacations.

O. H. Dorrance, the boys' favorite superintendent of the I. & G. N. (Texas), is away on a northern tour. George Crawshaw is acting vice.

G. C. Felton, an old-timer, late in mercantile business, has returned to his first love, accepting a the W. U. managership at Brenham, Texas.

D. R. Saunders, recently appointed manager of the W. U. at Corsicana, Texas, returns to the business after a three years' mercantile experience.

F. H. Marsh, manager at Willis, Texas, says: "No students need apply." Small pay and endless work to the contrary notwithstanding. Solid.

Miss M. A. Carpenter, manager of the W. U. at Marshall, Texas, is away on a visit north. The boys miss their genial "Good morning!" from "Ma."

The many friends of Frank Swain will be glad to hear that he is filling the responsible position of train dispatcher on the State Line R.R., in Rochester, N. Y.

E. B. Drane, late of Mobile, Ala., W. U. office, has his independent wire from Belton to Round Rock, Texas, nearly ready for business. Success to his enterprise and pluck.

CHEYENNE WYO.—A. C. Snyder is manager, and W. Williams chief operator; and Comb Green, W. M. Willson, Sam Kelly, and Nix Jones operators, an excellent force and a first-class office.

Yellow fever is raging at New Orleans, Memphis, Port Eads, Granada, Miss., and other Southern cities. So far we have only heard of one telegrapher being stricken down—the operator at Port Eads. We hope no more of them will fall victims to this dread disease.

W. T. Harrison, recently operator on New Orleans and Mobile R. R., has, in conjunction with Henry C. Miller, late of the A. and P. office, New Orleans, opened a bar-room, restaurant, and oyster-saloon in the latter city. "Billie's House" is the name of their place of business.

Major E. A. Burke, the successful and celebrated Louisiana politician, was originally a telegraph operator, and occupied a position as such on one of the Texas railroads not more than eight or ten years ago. He was not as accomplished a telegrapher as he has become politician.

Samuel Weeks, who was superintendent of the Fire Alarm and Police Telegraph system of New Orleans, under the administration of Governor Kellogg, died in New Orleans recently of yellow-fever. He was melter and refiner in the United States Mint at the time of his death.

Mr. Jno. K. Dunbar, assistant at San Antonio, Tex., has written 2,003 words, copied from the Bible, on No. 1 blank, not using "To" line. For

fine writing, Mr. Geo. E. Netherland, chief operator at Louisville, has a manifold sheet of his own receiving, which is probably not excelled in the Union.

W. A. P.

DENVER, COL.—B. F. Bush is chief operator, E. A. Greenwood, W. T. Crocker, G. E. Lawton, D. T. Cuthbert, and E. M. Herr operators. S. T. Armstrong, assistant superintendent, is one of the most faithful and zealous officers in the employ of the Western Union Co. Will Angove is the operator at the Colorado Central Depot.

Mr. Paul Bassart, of the Western Union, New Orleans, has gone North on a summer vacation. Mr. W. G. Shieble fills his place. Mr. J. V. Allen, of general office, C. St. L. and N. O. R. R., New Orleans, is also absent on a summer vacation. He has gone to New England. Mr. John Fitzsimmons fills the vacancy.

The non-student views of *THE OPERATOR* "catches" all the men on the I. & G. N. R. R., H. & T. C. R. R., T. & P. R. R., G. H. & Sa. R. R., in Texas. In fact, there is a general determination being manifested in that State to limit further production of artists to zero. Let other States be encouraged, and imitate their Lone Star brethren.

An imposter, representing himself to be R. T. (Artie) Brace, operator for the Western Union at Elko, Nev., and a contributor to the *Elko Post*, recently called upon the editor of the *Gold Hill News*, was kindly treated, and repaid the hospitality by decamping with a valuable silver specimen from the editor's cabinet of minerals. The culprit has had some experience in a newspaper office and as a telegraph operator. The Gold Hill police would like to meet him.

We have witnessed the wonderful performance of Edison's great invention, the duplex telegraph instrument. But a prodigy appears in the shape of an operator at Everett, Pa. We understand that he is a sort of triplex operator, having the following callings, which he fills with perfect satisfaction: telegraph operator, postmaster, and blacksmith. When he can't strike a spark on the wire, he makes them fly on his anvil; and when the line is down, he can send messages by mail.—*Cumberland Alleghanian*.

A MIRACULOUS ESCAPE.—William W. Stratton, an extra operator employed on the P. R. R., in getting off the train on Thursday, the 8th inst., at Marion, N. J., missed his footing, and was hurled beneath the moving cars and badly cut about the head and body. By direction of Mr. William Ettengen, division operator, Mr. Stratton was taken to the Hudson City Hospital, and his mother at once notified. After his wounds were carefully dressed he was removed to his home, where, under the skillful treatment of Dr. Daly, he is rapidly recovering. He is the oldest extra operator on the road, and is very highly respected.

MARRIAGES.

MURRY—LEONARD.—August 1st, at Kinzua, Warren Co., Pa., by R. H. English, Esq., Mr. Dan Murry, manager Western Union Tel. office, to Miss Rose Leonard, also of Kinzua.

DEATHS.

July 18th, 1878, at Brooklyn, N. Y., Annie E., wife of J. A. Wright, Jr., of 197 Broadway, aged 28 years, 2 months.

August 3d, at Hempstead, L. I., Arthur W., son of Frank H. Dennis, of the Auditor's Department, Western Union Tel. Co., N. Y., aged two years and five months.

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Philadelphia, June 26th, 1878.

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The business conducted during the past year by the undersigned, successor and surviving partner, under the firm name of JOS. MOORE & SONS, will hereafter be conducted in my own name.

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PHILADELPHIA, July 1st, 1878.

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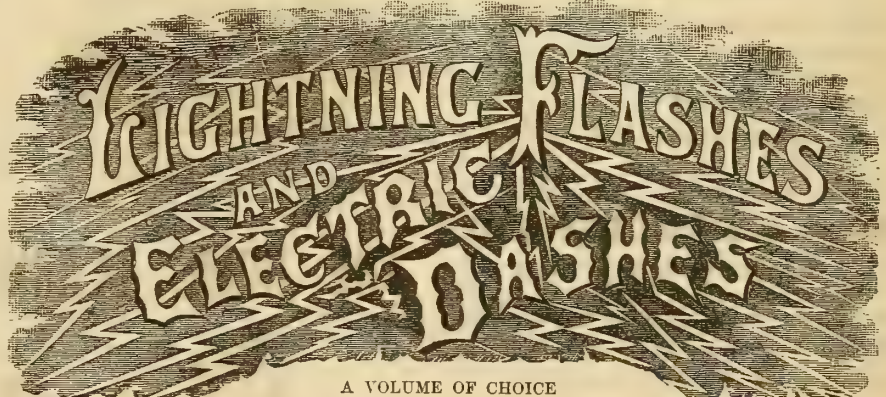
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A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

No. 17

MANUFACTURER OF

FLEXIBLE TELEPHONE CORDS.

THE OPERATOR

A JOURNAL OF
Scientific & Practical TELEGRAPHY

September 1st, 1878.

Volume IX.

Whole No. 109.

The Electric Telegraph.

Along the smooth and slender wires
The sleepless heralds run,
Fast as the clear and living rays
Go streaming from the sun.
No peals or flashes, heard or seen,
Their wondrous flight betray;
And yet their words are quickly felt
In cities far away.

Nor summer's heat, nor winter's hail,
Can check their rapid course;
They meet, unmoved, the fierce wind's rage,
The rough waves' sweeping force;
In the long night of rain and wrath,
As in the blaze of day,
They rush with news of weal and woe,
To thousands far away.

But faster still than tidings borne
On that electric cord,
Rise the pure thoughts of him who loves
The Christian's life and Lord;
Of him, who taught in smiles and tears
With fervent lips to pray,
Maintains high converse here on earth
With bright worlds far away.

Ah, though no outward wish is breathed,
Nor outward answer given,
The sighing of that human heart
Is known and felt in heaven.
These long, frail wires may bend and break,
Those viewless heralds stray,
But Faith's least word shall reach the throne
Of God, though far away.

REV. J. G. LYONS.

Edison's Phonograph and Megaphone.

Great improvements have recently been made in the phonograph by which the articulation has been rendered almost perfect. No change has, however, been made in the shape. Persons who have seen or heard the phonograph as at first brought out are astonished at the change that has been wrought in it. The old instruments have all been called in, new ones being sent out in their places. The phonograph, as was before stated in THE OPERATOR, is not sold—except to residents of foreign countries where it is not patented—but leased to agents, who pay one-fourth the gross receipts as royalty. The following in reference to the phonograph is an extract from Prescott's "Speaking Telephone, Talking Phonograph, and Other Novelties."

In its simplest form the talking phonograph consists of a mounted diaphragm (see engraving), so arranged as to operate a small steel stylus placed just below and opposite its center, and a brass cylinder, six or more inches long by three or four in diameter, which is mounted on a horizontal axis, extending, each way, beyond its ends for a distance about equal to its own length.

A spiral groove is cut in the circumference of the cylinder from one end to the other, each spire of the groove being separated from its neighbor by about one-tenth of an inch. The shaft, or axis, is also cut

by a screw thread corresponding to the spiral groove of the cylinder, and works in screw bearings; consequently, when the cylinder is caused to revolve by means of a crank that is fitted to the axis for the purpose, it receives a forward or backward movement of about one-tenth of an inch for every turn of the same—the direction, of course, depending upon the way the crank is turned. The diaphragm is supported by an upright casting capable of adjustment (see small engraving foot of this page), and so arranged that it may be removed altogether when necessary; when in use, however, it is clamped in a fixed position above or in front of the cylinder, thus bringing the stylus always opposite the groove as the cylinder is turned. A small flat spring attached to the casting extends underneath the diaphragm as far as its center, and carries the stylus; and between the diaphragm and spring a small piece of india rubber is placed to modify the action, it having been found that better results are obtained by this means than when the stylus is rigidly attached to the diaphragm itself. The action of the apparatus will now be readily understood from what follows. The cylinder is first very smoothly covered with tinfoil, and the diaphragm securely fastened in place by clamping its support to the base of the instrument. When this has been properly done, the stylus should lightly press against that part of the foil over the groove. The crank is now turned, while, at the same time, some one speaks into the mouth-piece of the instrument, which will cause the diaphragm to vibrate; and, as the vibrations of the latter correspond with the movements of the air producing them,

By torch and trumpet fast arrayed,

Each horseman drew his battle blade;

And furious every charger neighed,

To join the dreadful revelry.

APPEARANCE OF THE TRACINGS ON THE TIN-FOIL.

the soft and yielding foil will become marked along the line of the groove by a series of indentations of different depths, varying with the amplitude of the vibrations of the diaphragm; or, in other words, with the inflections or modulations of the speaker's voice. These inflections may, therefore, be looked upon as a sort of visible speech, which, in fact, they really are. If now the diaphragm is removed by loosening the clamp, and the cylinder then turned back to the starting point, we have only to replace the diaphragm and turn in the same direction as at first to hear repeated all that has been spoken into the mouth-piece of the apparatus, the stylus, by this means, being caused to traverse its former path; and, consequently, rising and falling with the depressions in the foil, its motion is communicated to the diaphragm, and thence through the intervening air to the ear, where the sensation of sound is produced.

As the faithful reproduction of sound is, in reality, nothing more than a reproduction of similar acoustic vibrations in a given time, it at once becomes evident that the cylinder should be made to revolve with absolute uniformity at all times, otherwise a difference, more or less marked, between the original sound and the reproduction will become manifest. To secure this uniformity of motion, and produce a practically working machine for automatically recording speeches, vocal and instrumental music, and perfectly reproducing the same, the inventor has devised an apparatus in which a plate

replaces the cylinder. This plate, which is ten inches in diameter, has a volute spiral groove cut in its surface, on both sides, from its center to within one inch of its outer edge. An arm, guided by the spiral upon the under side of the plate, carries a diaphragm and mouth-piece at its extreme end. If the arm be placed near the center of the plate, and the latter rotated, the motion will cause the arm to follow the spiral outward to the edge. A spring and train of wheel-work

regulated by a friction governor, serves to give uniform motion to the plate. The sheet upon which the record is made is of tin-foil. This is fastened to a paper frame, made by cutting a nine-inch disk from a square piece of paper of the same dimensions as the plate. Four pins upon the plate pass through corresponding eyelet-holes punched in the four corners of the paper when the latter is laid upon it, and thus secure accurate registration, while a clamping-frame hinged to the plate fastens the foil and its paper frame securely to the latter. The mechanism is so arranged that the plate may be started and stopped instantly, or its motion reversed at will, thus giving the greatest convenience to both speaker and copyist.

Mr. Edison has found that the clearness of the instrument's articulation depends considerably upon the size and shape of the opening in the mouth-piece. When words are spoken against the whole diaphragm, the hissing sounds, as in shall, fleece, etc., are lost. These sounds are rendered clearly when the hole is small and provided with sharp edges, or when made in the form of a slot surrounded by artificial teeth.

Besides tinfoil other metals have been used. Impressions have been made upon sheets of copper, and even upon soft iron. With the copper foil the instrument spoke with sufficient force to be heard at a distance of two hundred and seventy-five feet in the open air.

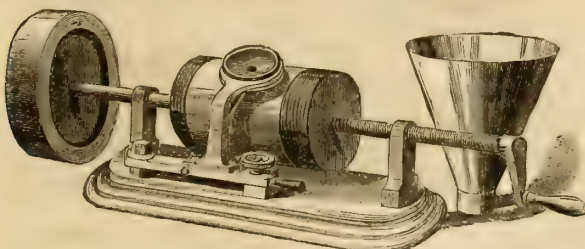
In using the phonograph, it is found best to speak in a loud, clear voice, and with distinct enunciation, that the vibrations may be sharply and deeply impressed on the foil. Attention must be also given to the movement of the handle, so that the passage of the foil under the stylus will be uniform and steady.

As the speed of the apparatus decides the distance between each dent marked by the sonorous vibrations, it must also decide the pitch of the tone when the sounds are reproduced. A bass voice will give only half as many vibrations as a soprano voice, one octave higher, and print half as many marks on the foil in a given space. If, in turning the instrument swiftly, the speed at which these marks pass under the stylus is increased, then the pitch of the resulting tones will be raised, and the bass voice may reappear as a soprano, or in a high, piping treble far above the pitch of any human voice. In a contrary manner, by turning the handle slowly, a soprano voice may reappear as a very deep bass.

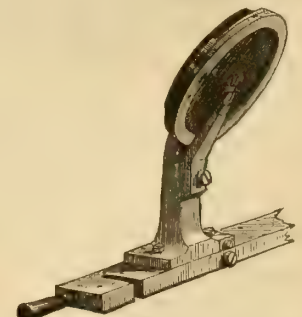
This curious circumstance, in connection with the speech of the phonograph, will undoubtedly make it necessary to employ clock work to move the apparatus, in order that an absolutely uniform rate of speed, and, consequently, rate of vibration, may be preserved while the machine is in operation. The foil, after having been impressed with the vibrations, presents a regularly lined or scored appearance, as will be seen from small engraving on this page. But so minute are the indentations stamped in the groove that they can hardly be seen without a glass. The foil is quite soft, and is liable to injury, and it is proposed to make stereotype copies of the proper size to fit the cylinder of the phonograph. Such cylinders will be permanent and durable, and can be used many times over without injury, or can be duplicated by electrolytizing. The tone of the phonograph is usually rather shrill and piping, but this defect will undoubtedly be corrected by improved instruments. It must be observed that, marvellous as this instrument is, it is still quite new, and it is impossible to say to what degree of perfection it may yet be carried.

INVENTION OF THE PHONOGRAPH.

The discovery of the phonograph, by the way, was made in a very simple fashion: While experi-



THE PHONOGRAPH.



CASTING FOR SUPPORTING DIAPHRAGM.

menting on an automatic transmitter in the early part of last winter, Mr. Edison tried tin-foil, instead of paper, to receive the indentations of the Morse recorder, and was surprised to see how readily it received them. These indentations, passing under another needle, were to repeat the message automatically to another wire. A few days after, while handling a telephone, the fancy seized him to fix a needle-point to a diaphragm, and see whether the vibration of the diaphragm when spoken against would cause the needle to prick his finger. It did. Then he wondered, what sort of an indentation this would make in a slip of paper. He tried it, and, sure enough, there was the semblance of an indented track! What would be the effect of drawing this slip under the point again, following the working of the automatic transmitter? He tried that, and the result was one which made him almost wild. A sound like the stifled cry of words seeking birth came from the diaphragm. No sleep or food until he had made a grooved cylinder, put a piece of tin-foil instead of paper on it, attached the diaphragm, and shouted into it, when, upon turning the crank, the words came back with a marvelous elocution, and the phonograph was a success.

The *Scientific American* gives practical instructions for making

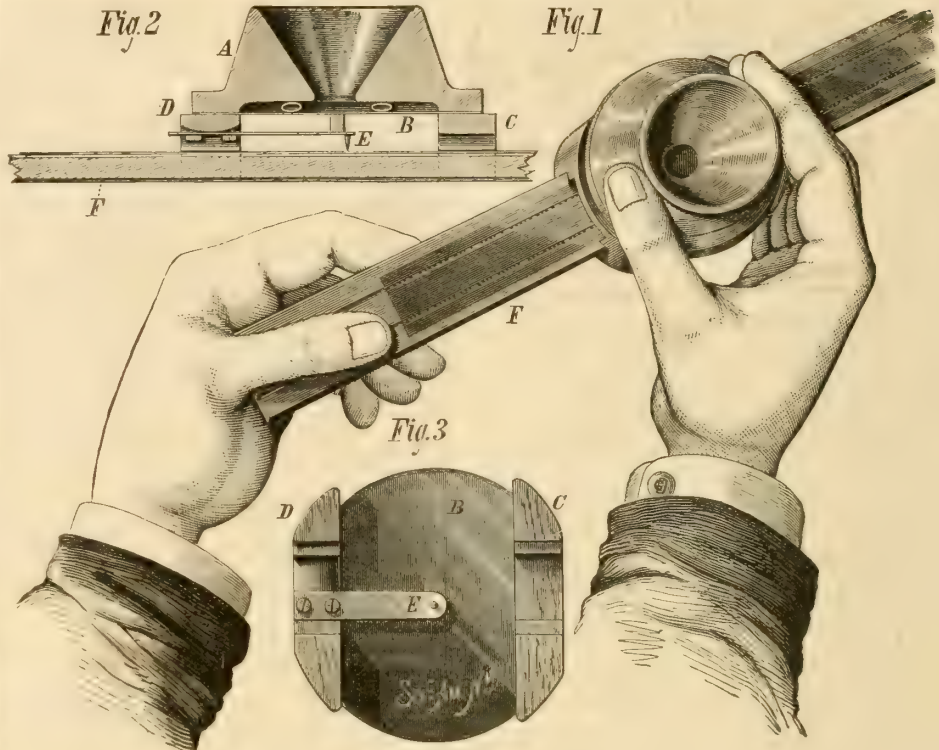
A SIMPLE PHONOGRAPH.

The instrument—which is shown in perspective in Fig. 1, in section in Fig. 2, and in plan in Fig. 3—consists of a mouth-piece, A, to which is attached a thin ferrotype plate diaphragm, B, by means of a good quality of sealing wax or cement.

Upon the outer face of the diaphragm and at opposite edges there are guides, C D, for receiving the wooden strip, F. These guides present only a slight bearing surface to the strip. The guide, D, is rounded to receive the spring, E, which is secured to it by two screws, by which also the spring is adjusted so as to bear with more or less force on the small rubber block which rests upon the center of the diaphragm.

A needle, which is sharpened like a leather sewing needle or awl, is soldered to the spring, and is located directly opposite the center of the diaphragm. The guides, C D, are placed so that the median line of the strip, F, is at one side of the needle. The strip, F, has four slight longitudinal grooves, two on each side, which are made with an ordinary carpenter's gauge. These grooves are located so that when the strip is moved through the guides, one or the other of them will pass over the needle. A piece of beeswax is rubbed over the sides of the strip to give it an adhesive coating for receiving the foil used in recording the sounds.

The foil, which should be rather heavy, must be cut into strips wide enough to extend beyond the grooves in the wooden strip. The foil is laid on the wooden strip and burnished down with the thumb nail, so that it will adhere. The strip thus prepared is placed in the guides, C D, and the needle is adjusted so that it indents the foil slightly as the stick is moved along.



A SIMPLE PHONOGRAPH.

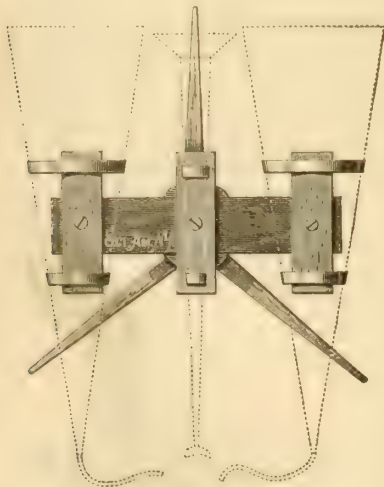
By talking in the mouth-piece, and at the same time moving the strip along with a smooth, steady motion, the sounds are recorded on the foil. By passing the strip again through the guides, so that the needle traverses the same groove, and applying to the mouth-piece a paper funnel or resonator, the sounds or words spoken into the instrument will be reproduced. It is even possible to record the sounds on a plain strip of wood so that they may be reproduced. The engraving is about two-thirds the actual size of the instrument.

THE MEGAPHONE.

Mr. Edison is able to converse through a distance of $1\frac{1}{2}$ to 2 miles with no other apparatus than a few paper funnels. These funnels constitute the megaphone, an instrument wonderful both for its simplicity and effectiveness. In the plan view the details of construction are clearly shown, and the

other engraving represents the instrument as it stands on the balcony of Professor Edison's laboratory. A mile and a half distant, shown at the extreme left upper corner of the engraving, there is another instrument exactly like the one in the foreground.

The two larger funnels are 6 feet 8 inches long, and $27\frac{1}{2}$ inches in diameter at the larger end. These funnels are each provided with a flexible ear tube, the end of which is placed in the ear. The speaking trumpet in the middle does not differ materially from the ordinary ones. It is a little longer and has a larger bell mouth. With this instrument conversation can be readily carried on in an ordinary tone of voice through a distance of $1\frac{1}{2}$ to 2 miles. A low whisper, uttered without using the speaking trumpet, is distinctly audible at a thousand feet, and walking through grass and weeds may be heard at a much greater distance.



PLAN OF THE MEGAPHONE.



THE MEGAPHONE.

The Yellow Fever Among the Operators of New Orleans.

The yellow fever has assumed serious proportions in New Orleans, and fears are entertained of a repetition of the calamities of 1853 and 1867. On Tuesday, August 20th, the operators in that city issued a call for a meeting of the craft to be held in the Western Union Telegraph building on Sunday 25th, for the purpose of organizing a permanent relief committee, at which operators representing the various lines were present. The meeting was called to order by Mr. Babbitt, who nominated Mr. C. H. H. Cottrell, of the W. U. office, for chairman, the nomination being confirmed by a unanimous vote. After stating the object of the meeting, the chairman announced the order of business, and the following resolution was offered by A. D. Babbitt:

Resolved—That a committee of eleven be and is hereby appointed for the purpose of relieving any operators suffering from yellow fever in this city, and that the said committee are authorized to make drafts upon the general fund, and dispense the same to the employees of the various telegraph companies in case of sickness as aforesaid, in such manner as they may see fit.

Be it further Resolved—That any individual member of the said committee be, and is hereby authorized to draw any sum not exceeding five dollars from the said fund upon his individual application, to satisfy the immediate necessities of any one requiring aid, but all vouchers for sums in excess of that amount, must be indorsed by a majority of the members of the committee. Carried. Mr. James T. Allyn of the W. U. was then elected treasurer, and A. D. Babbitt, of the same company, secretary.

We have received by telegraph from New Orleans the following communication in reference to the death of Chief Irvine:

The constant gloomy presence of death and desolation tends to harden our natures, and, like soldiers upon the battle field, we soon grow heedless of the terrors of the grim destroyer. Though we gaze with scarcely a shudder upon scenes which ordinarily would shock us, there still remains one little spot untouched, until one whose life, by constant intercourse, has grown into and becomes, as it were, a part of our own, is suddenly plucked from our midst to return no more. Such was our sad experience Saturday morning, August 24th, when our beloved and much esteemed chief-operator, Mr. Hugh Irvine, was called to his final account. The first symptoms of Mr. Irvine's illness, yellow fever, developed themselves on the evening of the 17th, and although at first they caused no serious alarm, his condition—notwithstanding that every effort was made to arrest the disease—continued to grow steadily worse, with the exception of one or two rallies, until his death. His funeral, which took place on Saturday, was well attended, considering the surrounding circumstances. The office was represented by Chief Chase, Operators C. H. H. Cottrell, William D. West, and J. J. McDermott, and Messrs. Gardner, Parsons, Blaney, and Slemmer, of the clerical force. Rev. Dr. Palmer rendered the burial service at the tomb—the last sad tribute of respect to one whose memory will live in the hearts of all who have seen in him the quiet, unassuming manner of the true gentleman; of those who have known the untiring efforts of the ever-attentive and efficient officer, and of the many who have felt the whole-souled, unostentatious self-sacrifice of the real friend. Mr. Irvine leaves behind him a name which, while it may not be emblazoned upon a pinnacle of great deeds, will shine un tarnished upon a monument of good ones. The limited circle of select friends whose society Mr. Irvine enjoyed, was the natural result of a retiring disposition, without which his admirable traits of character and endearing qualities of heart would have won for him the host of friends such possessions alone command. A model officer, a thorough gentleman, and a warm-hearted friend; it may be truly said that few knew him but many will regret him.

The force of the Western Union office in New Orleans is, as at present constituted, as follows: E. W. Barnes, manager; Chas. R. Chase, chief operator; Horace H. Hunt, Willis K. Woolf, Chas. H. Smith, Chas. S. Fisher, Paul Laloup, Lucius Sheldon, and John H. Riddick, day force; A. D. Babbitt, T. Jeff. Woolf, Chas. H. H. Cottrell, Wm. Dean West, Wm. G. Scheible, and John J. McDermott, night force.

The telegraphers thus far stricken down by the fever and their condition, reported by telegraph from New Orleans for THE OPERATOR, are as follows:

Manager Edmund W. Barnes, very low.
Chief Chas. B. Chase, dangerously ill.
Operator Chas. H. Smith, improving.
Operator Paul Laloup, just taken down and quite sick.

Operator John H. Riddick, in bad state of mind, case not yet pronounced yellow fever.
Repairman F. X. Delplaine, doing well, second day.

Number Clerk Allen Wilson, improving.
Two Western Union messengers getting better.
Chief Hugh Irvine died August 24th.
Operator F. B. Maxon, recovered, and returns to duty Monday, September 2d.

The above are all on the Western Union staff. Other New Orleans telegraphers attacked are:

Operator Jas. B. Hunter, Jackson depot, condition dangerous.

Operator Robert Hogsett, of the Morgans railroad, getting well.

Operator J. L. O'Connor, Police Line, improving.
Operator A. S. Harris, American District, getting well.

One American District messenger, very bad.

As soon as it became known that Mr. Moxon (who was the first attacked), was down with the fever, a movement was inaugurated by the telegraphers of Galveston to raise a fund for the relief of those of the fraternity in New Orleans who might be attacked, and anticipating any application for relief, the generous Texans raised nearly two hundred dollars in a few days for this purpose. This sum was at once forwarded to New Orleans to be ready when wanted. The prompt and generous action of the telegraphers throughout Texas is worthy of the highest commendation. Assistance has also been received from Montgomery, New York, and elsewhere.

Supt. Booth's Interdictory Edict.

I had no intention of contributing to the columns of THE OPERATOR for the purpose of furthering the proposed Telegraphers' Association until I read in your last issue the notice from Mr. O. H. Booth, superintendent, forbidding telegraph employees in his division from joining it. This edict prompts me to take up the cudgel in behalf of the movement.

I presume I am but one of hundreds of other telegraph employees who, after reading that notice, have felt their interest and zeal in this matter increase and quicken; and I believe that Mr. Booth, by issuing that order, has done more to further the matter than all the communications that have heretofore appeared in print.

It is the first official intimation that we have received from the other side of opposition to the association, and it is positive evidence that even the unquestionable right of telegraph employees to combine to protect their own interests will be disputed by some employers. It remains to be seen how many will indorse and follow Booth's example.

I do not believe that the controlling officials of the leading, and in fact the only telegraph company—the Western Union Company—will indorse such a policy; and while there may be some individual officials, like this tyrannical Booth, who will favor using the power of might, whether right or wrong, to prevent employees from exercising what has been very properly termed by a correspondent in these columns, the inalienable right of combination, still I believe the majority of the controlling minds in that company are such fair minded, liberal men that they will concede this right on the start, and not attempt to interfere with us. I will not believe, until forced to by some official declaration from headquarters, that Dr. Greens, Anson Stagers, John Van Hornes, and General Eckerts will deny to us a right already conceded to employees by most employers in England and other countries where trades unions flourish more extensively than here; a right that a majority of the aristocratic British Parliament conceded years ago, and have since fortified by the enactment of laws placing trade unions, beneficial, and protective associations on as firm a legal basis as any other institutions in the land.

I may be too credulous, and this Mansfield manifesto may be as you have said editorially, "the enemy's first gun," but I am inclined to believe that Booth is a bushwhacker acting independently, and not under orders from headquarters. I hope, for the credit of telegraph employers in general, that Booth is a bushwhacker, but whether he is or is not, he is woefully ignorant of the purposes, plans and objects recently advanced in THE OPERATOR, else he would not accuse the editor of that paper of attempting to revive and reanimate the "vicious" old League

organization. The plans suggested so far are different in many important respects from that of the League. Every editorial, every communication, that has appeared in THE OPERATOR thus far has advocated the formation of a more conservative organization than the League. Booth should know this, if he knows anything, and he probably does know it, but he is too much warped by prejudice, and too anxious to file a recommendation for promotion for himself, with those of his equally prejudiced and unprincipled superiors, to offer anything like fair and honest criticism of the thing condemned.

Now, in view of Booth's action and the doubts that exist as to his responsibility in the matter, it seems to me, before we agitate the subject any further, that we should ascertain the views of Western Union officials on this question; therefore I call upon you, as editor of the accredited organ of the fraternity, to obtain from the editor of the *Journal of the Telegraph* an official statement from the managers of that corporation, whether they intend to indorse Booth's action, and whether they intend to concede or deny the right of combination to their employees. Before we take another step let us know whether those who control the Western Union Company wish us to look up to them as masters, or whether they are willing to meet and treat with us in this matter as men. * * *

The New York Wire Club.

Life is a pendulum swinging between a smile and a tear. Great crowds rendered the sidewalks impassable to pedestrians in front of the New York Wire Club rooms on Monday night as the magnificent voice of Mr. Gilley Olmstead penetrated the evening air in that ever favorite melody, "Listen to the Mocking-Bird."

Fred Wilcox rapped for order. He congratulated the members upon the large number present, and added that he had managed to steal into the country for a short time during the heated term, where he found

"Books in running brooks, sermons in stones,
And good in everything."

(Applause.)

Jules Guthridge was received with applause. He informed the members that he left the service after the late gradation of salaries. The gradation was not a reduction. "No, sah," said the darkey waiter, "dat am not de second bell; it am de second ringing of de first bell, sah." (Applause.) The speaker, continuing, said that he was going to Australia in the clipper ship *Bounding Billow*, and if the boys should see in the marine columns of the daily papers that the B. B. had foundered in a storm, he hoped they would drop a tear to the memory of poor Guthridge. (Tremendous applause.)

The deep base voice of Supt. Weller during his rendition of the "Old Sexton" received merited recognition at the hands and feet of the delighted audience, but when, toward the conclusion of that beautiful song, the carefully-trained voice descended slowly but surely and correctly down the scale until low C was rolled grandly out, the spell-bound audience broke into a spontaneous outburst of applause that made Fifth Avenue ring for blocks away. It was several minutes before the tumult subsided.

Jerry Borst deplored the cold, blighting change gradually stealing over the telegraph business like mildew over ripe fruit. He sometimes talked to "old-timers," he said, to make sure that things were once as he believed them to be, and that the whole was not a feverish dream. (Applause.)

Perry Chamberlain said that the subject of Communism was not properly understood by the community. General Butler (cheers) says: "There is no occasion for such a thing as Communism, for in this country the power is in the hands of the working men, and ought to be in the hands of the working women as well." (Loud cheers.)

After a fine rendition of "Johnny Morgan," by ex-Chief Lawson, the meeting adjourned.

WINDING ELECTRO-MAGNETS.—A fact likely to be very useful in making electro-magnets has just been communicated to the French Academy of Sciences by M. Jamin, on behalf of M. E. Bisson. It is found by the latter that if in winding the wire on the core of electro-magnets, the wire, after completing a layer be led back *straight* to the point of departure again to begin the next layer, instead of winding the next layer backwards so as to fill up the bobbin by layers wound in reciprocal directions, as is usually done at present, a gain of one-third in magnetic power will be obtained, every other condition being the same. This gain is manifested either in sliding, pulling, or attraction at a distance.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

W. J. JOHNSTON, - - - Publisher.

September 1st, 1878.

WESTERN UNION stock has been going up in price since last issue. It is now quoted at 93.

A DISTINGUISHED honor has been conferred upon Mr. Edison in the award of the grand prize of the Paris Exposition for the most wonderful inventions of the age.

An interesting illustrated article on Edison's Phonograph and Megaphone will be found in this issue. We expected to have been able to add a portrait of Mr. Edison, but were disappointed. Hope to print it in some subsequent issue.

PLEASE tell every telegrapher not now a subscriber of THE OPERATOR that we will send a copy of the paper from present time till the first of January, 1879, and a copy of "Sam Johnson" or "Oakum Pickings," pre-paid, by mail, on receipt of only \$1.00, or a copy of "Lightning Flashes" and the paper same time for only \$1.75. Tell them to send in their subscriptions.

MR. CLIPPINGER's new book is now ready. Those who have been waiting can now order at once. All orders filled on receipt of money. Our readers can now secure several new subscribers apiece for us, and we should be glad to have them make the attempt. See cheap rate for "Sam Johnson" or "Oakum Pickings," and also "Lightning Flashes," in connection with the paper, until January 1st, 1879, and draw the attention of non-subscribers to the very liberal offer.

THE officers of the Continental Telegraph Company assure us that they will positively have their wires working between New York and Philadelphia by the first of October. They say that they have the offices connected in both cities, and that after opening in Philadelphia, they will extend their line to Boston. The main office of the Continental Company in this city will be at No. 8 Broad Street, the executive office at 58 Broadway, and branch offices at 96 Wall, 86 Beaver and 133 Pearl, 62 Worth Street, and Fulton and Washington markets.

A new adaptation of Edison's telephone has just been carried into effect by the Gold and Stock Telegraph Company. It is styled the Telephone Exchange, and by its aid subscribers to it can be instantly placed in communication with each other by signifying their desire to the central office. Experiments in this direction have already been made with the Phelps magneto-telephone, but they resulted in failure, the sound of the voice being drowned by the noises of the street, the vibration of adjacent wires, etc. With the Edison instrument, which is worked with a battery, there are none of these inconveniences. There are plain printed instructions framed in each instrument, and the working of the whole arrangement is simplicity itself.

The Yellow Fever in the South.

We mentioned last issue the existence of yellow fever in the South. To-day we publish considerable matter in reference to the ravages of the epidemic among the operators in that section, and give a complete list of those stricken down in New Orleans, with their condition, received by telegraph up to the moment of going to press.

New Orleans, Grenada, Vicksburg, Memphis, and other cities being rigidly quarantined against, everything in the shape of trade or commerce in these places is almost at a complete standstill. The only persons doing any business are doctors, druggists, undertakers, carriage drivers and telegraph operators. Telegraphing being about the only means of communication with the outside world, the mails being strictly quarantined against, has more than doubled since the appearance of the fever, and operators are becoming as much worn out from extra exertion as are doctors and nurses.

The New Orleans operators have organized for mutual aid and protection and nursing during the epidemic. They nearly all live in the same neighborhood, which, unfortunately, happens to be one of the most infected districts in that plague-stricken city. Five of them board at the corner of Camp and St. Joseph Streets, and on that entire block there is scarcely a house where there is not yellow fever. Most of the operators are acclimated. Paul Bossart, not being, left Aug. 1st on the steamer Cannon for Vicksburg, Mr. McDermott relieving him. Hugh Irvine, chief operator of the Western Union Telegraph Company, and F. B. Moxon, operator for the A. & P., were taken with the fever. Mr. Irvine died August 24th, after six days illness, but Mr. Moxon has now recovered. Manager E. W. Barnes, who figured in the Congressional investigation last winter, and operator C. H. Smith, are also down with the fever. The telegraphers of Texas have forwarded \$160 for the relief of the sick New Orleans operators. Northern telegraphers will not be slow, we hope, in following their praiseworthy example.

Mr. C. H. H. Cottrell, of the New Orleans Operators' Relief Committee, appeals for aid to his fellow telegraphers. Contributions sent to Mr. J. T. Alleyn, Cashier Western Union office, New Orleans, will be judiciously used. In response to this appeal New York operators have sent about \$100, St. Louis nearly as much, and several other cities smaller amounts.

There have been about 150 new cases a day at New Orleans for the past week, and about fifty deaths a day. Last Saturday the number rose to 193 new cases. As many as 50,000 or 60,000 residents have left the city to avoid the infection.

At Grenada, Miss., the regular telegraph operator is Mr. W. M. Redding. He has been so busily employed sending and receiving dispatches that he could scarcely venture out into the street, and has had little time to think about danger. He was prostrated, however, one morning from overwork and nervous exhaustion—having worked from eighteen to twenty hours a day since the breaking out of the plague—but rallied and returned to duty same afternoon. John F. Heaberg, an operator from Winona, volunteered his services to help Redding, and on his arrival both made the rounds of the town. In the Court House they found sixty-five invalids, presenting a horrible sight. Men dying and begging piteously for food—a single mouthful of which administered

to them would prove fatal—were seen on all sides. Both operators pronounced it the most horrible spectacle they had ever gazed upon. Redding has immense pluck, and says he will stick to his post until the disease is conquered, or there is no one left. In the Chamberlain House, the same building in which the telegraph office is situated, there have been numerous cases of yellow fever, and several deaths from that cause.

Among the sick at the Bristol House, was Mayor Conley, whose family were in the same house. He was prostrated August 15th. Before that he had been one of the brave men who were determined to outface and fight the pestilence. His son-in-law, Mr. Atwood Wiltshire, a telegraph operator who had gone down from Memphis to assist Mr. Redding, was with Mayor Conley when he was taken sick. In the midst of his labors the Mayor's nerve suddenly gave out, and he went up stairs to his room, lay down upon the bed, and declared that it was all over for him, as the fever was upon him. He rapidly became worse, and in his delirium tore the bedclothes in pieces. He died August 19th. His daughter, Mrs. Wiltshire, wife of the telegraph operator, and her two little children were in the house, but they had not taken the infection. Mr. Wiltshire left the place immediately after his father-in-law's death, and took his wife and two children to Holly Springs, returning himself to Grenada in the afternoon, to be near his mother and sister, who were sick, and would probably die. A telegram from Grenada, dated August 30, reports that Tom Marshall, a telegraph operator, is down with the fever, and that the body of his little son, who died three days ago, remains unburied for want of money.

Walter Dennett, press operator at Vicksburg, was badly scared on the night of August 10th. A physician fresh from the deathbed of a yellow fever patient came to the office to send a dispatch. When Mr. Dennett discovered the state of affairs he was very indignant, and the medical gentleman was vigorously requested to stand not upon the order of his going, but leave the office at once, which he did.

A meeting of telegraph men was also held in this city Aug 29th, "for the purpose of selecting a committee to devise means of assisting our plague-stricken brethren at the South." Ten W. U. and A. & P. officials were appointed on the committee. General Supt. Van Horn same day telegraphed that the W. U. Co. would defray the nurses' and physicians' bills of operators stricken down while attending to their duty. Mr. A. H. Watson, Secretary of the Telegraphers' Mutual Benefit Association, sent the following telegram to the representatives of the association in the fever-stricken district:

"The Executive Committee of the association have unanimously voted to extend aid to needy members of the association suffering with yellow fever. Report each case by wire, stating what is needed."

Supt. Van Horn, Chairman of the Telegraphers' Aid Committee, was directed on Thursday to draw on the Committee at Pittsburg for \$200.

The Union Pacific telegraphers, August 30th, sent \$500 for the benefit of the Southern sufferers.

We have a large number of letters from correspondents on the subject of the proposed protective association, and may probably print some of them next issue.

Mr. Edison's Latest Discoveries.

Mr. Edison has returned from his vacation, and already announces two more new inventions—the sonorous voltmeter, an instrument for measuring the strength of telegraph batteries, and a new ink by which blind people will be enabled to communicate with each other. He says he enjoyed his trip through the Far West, and tells a story of being tracked on one occasion by a scout over a distance of eighty miles, the scout having nothing to guide him but tobacco juice. It appears that a cable dispatch came for Mr. Edison at Rawlins, but he had gone out hunting with a party of thirteen, some of whom were old western hunters. Word was cabled back that the message could not be delivered, as the whereabouts of the party were unknown. Soon an answer arrived to send out a scout in search of them. The scout traveled for three days over the wildest sort of country, with nothing to guide him but the trail of tobacco juice, which the hunters of the party, who were inveterate chewers, left behind. Once he lost the trail, and was for hours in doubt, but again got it. “Sharp fellows, those scouts,” Mr. Edison adds.

In the sonorous voltmeter—by the way, surely considerable of Mr. Edison's time must be taken up inventing such names, leaving the inventing of instruments out of the question—bubbles are made to rise in glass tubes, the noise being magnified by a funnel. By counting the number of ticks made by these bubbles per second by a watch, you get the exact strength of the battery.

The blind writing ink makes a grayish, white mark. In about a minute after the writing is done the ink begins to swell and harden until it becomes perceptibly elevated over the paper. Then by running the fingers over it, the letters and words can be distinctly traced. The blind are very sensitive to the touch, and by writing with this preparation can communicate with each other, and a great field of happiness and mental improvement will thus be open to them. Mr. Edison, however, is not yet quite satisfied with the preparation. He thinks he can make the elevation still more marked.

Mr. Edison has also made a contrivance for ascertaining the quantity of ore in any given place once gold is struck, as referred to in another part of this paper. He says it is very simple, and absolutely reliable, and thus explains it:

“The ore is surrounded by a bed or bank of conducting material. For instance, in the mines which I examined that material was clay. The quantity of clay is an indication of the quantity of ore. When gold is struck thousands are often expended in drilling for more when in reality the vein is completely exhausted. The contrivance I suggested enables the miner to know whether or not the vein is exhausted. I simply make a ground connection, and run a wire through a battery and instrument. Now, I take the other end of the wire down the shaft, and connect it with the clay or other conducting material surrounding the ore. If the clay bank is extensive, the connection is a good one, and the current of electricity flows freely; but if the clay bank is small in area, a poor connection is formed. By adopting a unit of measurement the area can be told almost to the square foot.”

The honor of the “fifth degree” has just been con-

ferred upon Mr. Edison by one of the most prominent scientific institutions of Mexico for his valuable inventions.

At the session of the Association for the Advancement of Science at St. Louis, August 28d, Prof. Baker said that the time had come when the scientist was no longer the only discoverer; the practical man had found science too slow, and had stepped in and discovered for himself. It gave him great pleasure to introduce to the Association one of the new members, whose name had been heralded throughout the country, and whose researches were known throughout the world. Prof. Baker then presented Thomas A. Edison, who was received with great applause. In response, President Marsh said that it certainly gave the Association pleasure to welcome the gentleman who had done so much to help science by his wonderful inventions, which reflected glory upon the genius of America. It would be probably the most gratifying intelligence to the gentleman himself, as well as to the audience, to hear that the Association had been informed that morning, by a telegram from the Paris Exposition, that the grand prize at the Exposition had been awarded to Mr. Edison for the most wonderful inventions of the age. A motion was made and carried that a committee of three be appointed by the Chair, to arrange for a eulogy of Prof. Henry, the former President of the Association.

THE Dominion and Mr. McClelland are not to carry off the honors for fine writing so easily. Mr. McClelland got down 100 words to the square inch, but here is Mr. Davis, who originally commenced this trouble, with 1989 words in a space of 3 1-8x4 inches or 12½ square inches. This is 159 21-25ths to the square inch, or we might almost say 160. He also sends two separate areas of one square inch each. One contains 295 words, and the other 305. The writing in both cases is fine, but distinct. Ben Harris, of Creston, Iowa, also sends 1200 words, written in a space of 10 square inches, and 3265 words in a space of 40 square inches. Some of the writing in this case is comparatively large, but the lines are very close together. Milton Blanchard, a boy in the Lebanon, Pa., office, sends 2787 words within a space of 17½ square inches, 4½x4½ inches, which is certainly very creditable. The Mr. Thompson mentioned in this connection last issue, is in the Western Union office at Owego, N. Y., and not Oswego, as the types made us say.

A CORRESPONDENT in this issue calls upon us to find out if possible whether Mr. Booth's order to his subordinates prohibiting their joining a protective association, published in last issue of THE OPERATOR, emanated from himself or from the Western Union Telegraph Company. In reply we would say, that we are assured by a gentleman in a position to know that the order was issued on Mr. Booth's own responsibility, and on his own motion. His lines, although a part of the Western Union system, are worked by the Pennsylvania Company, the corporation by which the railroads leased by the Pennsylvania Railroad Company are operated. All the operators are paid by the Pennsylvania Company, not by the Western Union. The latter, under the circumstances, he adds, will neither disavow nor indorse Mr. Booth's action, and, in fact, has nothing to do with it one way or the other.

EDISON's visit to the mining regions of Nevada has suggested a new idea to him. He thinks that the size, character, and point of croppings of a mineral lode may be determined by the difference of the conductivity of electricity, provided that the walls of the ledges are lined with clay or decomposed rock. He tested his theory on the Comstock lode on his return from California. Should his plan prove practical, instead of running long tunnels, sinking deep shafts, or boring here and there with the diamond drill, a miner would apply the electrical apparatus, and thus find out how much ore there is in a mine, where it lies, its direction, and the point where its croppings may be looked for.

They have what are called torpedo telegraph poles in Australia. By an arrangement of “supplementary currents,” vigorous shocks are administered to any one interfering with them. The unexpected punishment, attributed to supernatural power, which fell upon certain natives in the vicinity of McDonald Peak, when they attempted to cut the wire, has had the effect of deterring other tribes from in any way damaging the line, of which the total length is about 2,100 miles.

WE have received an article from Mr. Clippinger in reply to Werner's last letter, also a communication from a Philadelphia operator espousing Werner's cause. The matter, however, is becoming almost too personal, and we hardly think our readers will blame us for declining to publish anything more on the subject. Let us have peace.

Lighting street lamps by electricity, recently tested in Pall-mall, London, did not prove a success. At a late meeting of the St. James Vestry, it was officially reported that the system had proved an entire failure, and it was decided to request the inventor to remove the apparatus at once.

Gray's harmonic telegraph is in operation at the Paris Exhibition. It is connected up with the Morse instrument so that the vibratory telephone messages are sent simultaneously with the Morse messages.

The cottonwood telegraph poles used along the line of the Southern Pacific road have sprouted, and promise to supply a continuous line of shade trees.

A message was recently sent from London to Adelaide, South Australia, and an reply received in 18½ hours.

Echoes from 197.

Theodore Williams, an ex-operator, and who at one time worked in New Orleans, sent in ten dollars for the benefit of the sick telegraphers in that city.

Mr. D. Harmon, Jr., is working the New Orleans wire, days. In the classic language of Perry Chamberlain, “it's a hot string.”

A schooner ran against the cable-house, a small box which connects the land wires with the submarine cable of the Western Union Telegraph Company crossing the Harlem River near Macomb's Dam Bridge, on Thursday. The jar caused by the collision made the wires vibrate violently, and two of them parted. The cable, however, was uninjured, and the business of the line was not impeded by the accident.

“Be sure you are right and then go ahead” is a truism which “Cp” will be apt to remember the next time he makes the assertion that no lady operator on the city wires can rush him. “Helen” can.

The late chief operator, Hugh Irvine, who died recently in New Orleans of yellow fever, belonged to London, Canada West.

Concerning a Certain Prodigal.

Adapted for THE OPERATOR from *Scribners' Monthly*.

The first time I encountered the late Noah Babbitt, telegraph operator, he struck me, as they say on the frontier, for a loan of two dollars. It was in the sanctum of the *Commonwealth* newspaper at Topeka. He had drifted in from his habitual wanderings only the day before, and been put on to "sub" for one of the Western Union operators who was going off on a vacation. After the last of the loafers had gone, and while I sat running my pencil hurriedly over a delayed proof, and vexed with the heat and the buzzing of insects about the lampshade—it was a fervid August night, I remember, with not air enough to disturb the exchanges lying loosely in the open window—he tapped me familiarly on the shoulder and said:

"Cap., I was reading the *Commonwealth* after supper, and that leader of yours yesterday on the labor question was an awful good thing; you sounded the key-note, and I thought I would drop in and congratulate you."

And thereupon we shook hands with extravagant warmth, though, I think, with a reservation of mutual distrust, and then we fell to talking on a variety of topics, ranging from pauperism to the doctrine of the atonement, in that candid, positive and encyclopedic, but picturesque and superficial, style common to newspaper men and telegraph operators the world over. So much did the fellow interest me, that, weary as I was with the night's work, I found myself, after two hours, still patiently listening to him. In spite of my first instinctive misgivings, he made me like him. He seemed so frank and self-confident, so observant, so quick witted, and so heroically contented; and then, did he not fill every lull in the conversation with a flattering reference to my editorials? Ah, right well he knew, the calculating wretch, that he, too, had sounded a key-note with that introductory congratulation! But it was not until after we had finished our talk, and I was making ready to leave him, that he asked me—I hardly knew how it was done so dexterously—to favor him with a "couple of dollars, till pay day." Of course he got it, though I needed not to be told that with the borrowing telegrapher as with the borrowing printer, "till pay day" is a measure of time that spans eternity; and then he walked with me, arm-in-arm, to the Old Crow saloon, where he would not permit me to avoid joining him in a glass of ale, and as I turned to go, I saw him hand my two-dollar bill over the bar with an air of complacency that really touched me like a personal kindness.

After this he called often, and we came to be quite cordial, not to say confidential, in our relations. Every night, almost, when I was waiting for the cabalistic "80" that ended the telegraphic news report, or after the final proofs had been corrected, he would come slipping into my room with a soft, considerate tread, and we would talk there all alone as at our first meeting, or if the weather was pleasant, would go forth into the night and walk the broad, smooth streets till the moon went down. My friend was a confirmed "bannerite," as printers term it—a careless, shiftless, strolling vagabond, here to-day and there to-morrow, without home or kindred, who treated life as a farce full of amusing checks and balances, with death closing it all, at last, in a kind of unguessed conundrum. He had walked thousands of miles over the country. He always walked when he traveled, except on rare occasions when some kind hearted superintendent favored him with a pass. "I get sea sick on the cars," he said to me once, with a grim smile; and then he added, slowly and in a skinking tone, "makes my feet sore to ride, too." During the previous year he had "made the tour of Canada," as he phrased it; thence to Boston, New York, Charleston, New Orleans, and up the Mississippi to St. Louis, and then across Illinois and Iowa, and finally to Topeka. He had not worked over a week in any one place, and had ridden scarcely any during the journey. "A hankerin' for scenery," was the reason he gave me for this extended ramble. And surely he had not been blind to the shifting delights of sky and sea and shadowing forest which had opened out before him like an unrolling picture. Nor had he failed, vagabond as he was, to note the peculiar and varying traits of the different peoples among whom his travels had led him; for he had a keen insight, and detected a flaw or a foible of character as if it had been a red message in a pile of full rate business. He was better than a book to me, since he read himself and turned his own leaves; and I grew to look forward all the day to his coming nightly visit with impatient eagerness. No doubt he lied to me

many times and scandalously, for he was mortal and not wholly without egotism; but he did it, when he deemed it advisable, in such a large, overcoming, cliff-like way that it was almost as good as the truth. Where there is much to interest, says some generous philosopher, there must yet be something to pardon.

Why he was known among the men of the telegraph office as "Old Noah," I could never quite make out. Perhaps it was because he had traveled so far and seen so much, that his life seemed to them to have been projected forward, somehow, faster and farther than the years counted. Or, it may have been that his supreme indifference to all the alert and urging elements of every-day life, gave to him in their estimation, something of the leaning and waiting spirit of one aged before his time. Telegraphically he was called an "old timer," but certainly he bore no physical signs of being an old man. He stood erect, lacking even the depression of chest that is characteristic of operators; his eyes were full, clear and steady. The oldest thing about him was his costume. That was always and conspicuously in the pathetic second childhood of decay, and always, too, out of harmony with the prevailing weather, thus appearing to have been left over from the preceding season. The summer that I saw so much of him he wore a heavy, dingy beaver-cloth coat, usually buttoned to the chin with clerical exactness—too often, I apprehend, only to hide the want of a shirt; and he declared to me with every indication of truth, that a pair of brown cotton overalls had served to temper the bitter Illinois winds to his shuddering frame through the previous winter.

"The peacock is a pretty bird," he remarked to me once, casually discoursing upon this matter of apparel, "but it doesn't count; with all its gaudy feathers, it can't sing worth a cent. It looks well, but its music is the most abominable noise I ever heard,—and I have boarded in a house where they kept a melodeon," he added, with a conclusive toss of the head.

"Old Noah" was a good deal of a cynic, though his cynicism was so closely woofed with a subduing sincerity that it was very difficult, frequently quite impossible, to tell where the one left off and the other began. As I have said, he looked upon life as a play, and he was fond of reciting Shakespeare's "Seven Ages" in support of this idea. "It's all right," he would argue, "as long as you don't care. That's the whole secret. Ignorance is bliss oftener than we think; it's knowing too much that bothers people, and if you're bothered you can't enjoy the show, don't you see? It isn't altogether unlikely, let me tell you, that a well behaved dog, asleep in the sun and sure of a bone for his dinner, is not better off than we are, with all our wisdom and all our doubts." And yet he revered wisdom, I am sure, and respected all honest opinions, and I think that, away down in his heart, lurked a quiet faith in the saving power of virtue; but I doubt if he believed very much in the naked moral strength of human nature. Singularly enough, too, his skepticism was confined to his own sex; singularly, I say, for he was a man, you know, and not a woman. "It was Eve that the snake had to charm and betray," he was accustomed to put it; "Adam fell as a matter of course." This was a little sophistic, to be sure, as much of his logic was apt to be, but the sentiment of it was so knightly that it readily won him credit among his critical fellow-operators, even at the expense of some disloyalty to their own personal sense of masculine superiority.

He had been in love, once in his life, this tattered prodigal, and the venture had not been what could be called a complete success. He told me all about it, of his own accord, one restful night as we sat on the bridge at the foot of Kansas avenue, listening to the quiver of the cotton-wood foliage, and watching the river slowly gather the shadows to its tawny bosom. He was religiously sober that night, for a wonder, and I felt that it must have been some subtle witchcraft of the atmosphere, rather than the few so-so remarks we had just been exchanging about Phil. Reade's marriage with the winsome little singer, Minnie Beals, that so suddenly drew his eyes away from the water and out into the vague perspective beyond the opposite shore, and sent his thoughts backward with a bound, as it were, to the rich days when every sky was blue to him and every sound a rapture of harmony.

(TO BE CONCLUDED IN OUR NEXT.)

The steamers sent out from London to repair the 1866 Atlantic cable were unable to accomplish anything, and had to return without success. The cable was hooked several times, but the iron sheathing was so rusted that it could not bear the stress of raising the cable to the surface.

An Interesting Letter from Montreal.

It is some time now since anything from Montreal has appeared in the columns of your lively little paper. It is almost needless to add that since my last communication a great many changes have taken place here, principally owing to the general stagnation of business. Any one who worked in this office four years ago—and returned now, would miss a great many old familiar faces. Billy Drumm, who once figured prominently as night report man, is hard at work studying medicine in McGill University, with, I hope, a brilliant future before him. Andy Cook is doing night duty at Dubuque, Iowa. Inglee is working his way in N. Y. office, and giant Young is resting from his labor somewhere in New Jersey. Ritchie, the fast man of the Dominion office, is anchored at Omaha, and Billy Woods is fast realizing his dream of "building silver stacks" in Detroit. Other meteors who have shot across the telegraphic horizon of this city, displaying their brilliancy for a brief period, have as suddenly disappeared, leaving no trace behind them. Business seems to be livelier here this season than for a long time past. Riots, occasioned by party feeling throughout the provinces, boat racing, and the near approach of a general election, all have their exciting effect on the wires, and tend to increase the amount of business. J. Clandinon, for several years our night chief, resigned some time ago, and accepted a position on the day force. J. Kent, well known in Canadian circles, succeeded him, and keeps the mill moving with credit to himself, and satisfaction, I presume, to the company. Mr. Baurne, treasurer of the M. T. Company, in conjunction with Mr. Hosmer of the Dominion, Mr. Bains of the District, and Mr. Stephenson of the Grand Trunk R'y, have been actively engaged for some time past, in agitating an athletic club among the fraternity. A large meeting was held last night in Mechanics Hall, Mr. Baurne in the chair. After a few well chosen remarks relative to the benefits to be derived from such a feature among telegraphers, it was moved and adopted that "we form a club exclusively confined to persons engaged in the telegraphic business, said club to be known as the Telegraphers' Athletic and Literary Club." A Constitution was then drafted, followed by the election of officers with the following result: President, C. Baurne, Treasurer, M. T. Co.; Vice-president, J. Stephenson, telegraph superintendent, G. T. R.; Secretary, W. C. Cherry, M. T. Co.; Treasurer, W. J. Graham, M. T. Co.; with a committee of five, composed of Messrs. C. R. Hosmer, D. T. Co., E. A. Baynes, C. and D. T. Co., J. S. McConnell, M. T. Co., B. J. Hickey, G. T. R., and J. G. Henry, G. T. R. Over seventy-five names were enrolled at the meeting. To all appearance the club seems destined to enjoy a brilliant future. The addition of an electric department in conjunction with this club will render the movement especially valuable in the eyes of every sensible telegrapher.

Messrs. Baurne and Stephenson have already earned the thanks of every one connected with the business throughout Canada by the very active interest they have always taken in connection with anything tending to the welfare of the fraternity. They have spared neither pains nor time to thoroughly organize the Canadian Telegraph Insurance Association, and place it upon the sure footing it to-day rests upon. This success may be attributed to the deep interest which both these gentlemen have taken in the project. That the formation of an athletic club will be of great benefit, no operator will pretend to deny. There are a certain number of men who will pool-pool this project in its infancy, and predict for it a failure—just as they predicted the failure of the Insurance Association in 1875. Let us hope that, like dreams, their predictions will be reversed, and that the fraternity will show their appreciation of the efforts of the projectors of the athletic club by joining it to a man.

Many of the readers of THE OPERATOR will regret to learn that a telegram received from Victoria, Vancouver's Island, announces the death of Mr. Edward Conway, formerly of this city. To his old companions in railroad and telegraph circles this will indeed be melancholy news. He entered the service of the Grand Trunk Company when quite a boy as telegraph operator, and at that period showed a quickness of perception and ability which subsequently gained for him positions of great responsibility and trust. After faithfully serving the G. T. R. and the Montreal and Western Union Telegraph Companies, he was, at the opening of the American war, placed in charge of the Secret Telegraph Service, in connection with the armies commanded by Generals Banks, Sigel, Grant and McJellan, and had personal supervision of the cypher and tele-

graph arrangements used in conducting the operations of the various divisions in their movements. For the ability he displayed in this respect all through the war, he received the highest encomiums, personally, from General Banks and his staff, as well as from the authorities at Washington. After the close of the war he was engaged in the building of the "Overland Telegraph," and was selected by Col. C. S. Buckley for the construction of the line through British Columbia to Behring Straits. He built about fifteen hundred miles of it through the territory (which is now worked by the Western Union Company) and in doing so had to travel through a great portion of Russian America (Alaska). This immense undertaking fell through, however, on the successful completion of the Atlantic cable. At the time of his death he was carrying out a large contract for the building of a telegraph line in British Columbia, but he was fated never to see it completed. Those who had the pleasure of knowing "Ned" Conway (as his brother operators and friends familiarly called him) whether sitting at his "telegraph key" or by the camp fire on the banks of the Potomac, knew him to be a genial, open-hearted fellow, and a man whose word could be, at all times, relied upon. His many comrades in Montreal and elsewhere will sympathize deeply with his family in this affliction, as, though suffering for some little time back from inflammation of the lungs, his death, which occurred on Tuesday morning in his thirty-seventh year, was unexpected.

CERISE

MONTREAL, August 14th.

Chicago Notes.

Some of the boys who have been passing a season with the old folks at home, and others who have been at watering places in keeping with their exchequer, have returned to the city. A few are yet absent, and several propose absenting themselves during the month of September. Notably, sub-chiefs Holligan and Lloyd, "Al." Baker, one of the most deservedly popular men of the fraternity here, truly "the man who knows no enemies," was married recently to Miss Glasson of the W. U. force. They went east on a wedding tour, and took with them the good wishes of all who knew them. May this union be as peaceful, serene, and prosperous as their lives have thus far been worthy of imitation. "Doc." Dorchester has accepted the management of Racine, Wis. W. U. office. Deserving appointment. Crosby Ryan has resigned on account of failing eyesight, and left for Detroit. The famous "Hud" has departed for Florida to recuperate his failing health. E. W. Emery recently passed through the city on his way to the "Far West." "Bob" Lord has returned to work after an absence of several weeks, caused by failing eyesight. "Bob's" many friends will be pleased to learn of his recovery. O. M. Stone, who has been absent attending the funeral of his father, has returned. A. W. Nohe has resigned from the W. U. day force, and gone into the commission business. Jno. W. Smith, Charley Cloud, "Jimmy" Bryant, and Harvey Nicholls have left the city, whither no one knows. R. W. Ledwith, who has been absent for a month, caused by the sudden death of his father, has returned, and been assigned to duty on the Indianapolis quad, vice Gallagher assigned to the Cleveland quad. E. C. Greene has returned from a short vacation. "Bob" Hayes has gone to Buffalo. New arrivals are D. R. Bonnell, of Cincinnati, Mr. Barsden, of St. Paul, Mr. Story, of Kansas City, and Archie Howe, of Cincinnati, with several others whose name and fame are unknown save to the great financier who brought them from their seclusion for fifty dollars a month. Ed. Foote, F. C. Long, and "Hi" Waters of the Board of Trade, and Mr. Hutchinson of the A. & P. are working extra nights for the W. U. at the munificent sum of fifty dollars. Mr. Boyle has been transferred from the night force to the Milwaukee quad, days, and Mr. Letourneur to Cincinnati quad, days. C. R. Vestal, (Eitemiller's rival) has gone to the wilds of New Mexico. Jno. Strong takes the western report, formerly and admirably done by Mr. Vestal. Joe Barley has been transferred from second to first New York, and J. M. Wright from Milwaukee quad to second New York, nights. J. McRobie, who was dangerously ill for several weeks, is again at the New York quad, days. O. W. Hamilton, who left the service some months ago, has been added to the day staff. This is an instance of the magnanimity (?) of the management here that requires publicity to the end that all future comers, and those who are already zealous companions, may see the absolute necessity for a practical organization. When Mr.

Hamilton resigned from the office, he was sub chief of the overland wires at a salary of ninety dollars a month. He is a first-class operator, a reliable, sober, and industrious man, and had performed five years service in this office, but having been unsuccessful in his business, and per force of circumstances compelled to return to operating, he is taken back at the paltry sum of fifty dollars a month! Further comment is unnecessary. E. P. Whitford was recently presented with a twelve pounder, and J. H. Vestal with a pair of twins. Discouraging in the extreme these dubious times. Hank Cowan, the unconquered, irresistible Hank, has enlisted in the regular army, and been assigned to duty at Columbus Barracks, Ohio. George Leary has resigned as operator at the Palmer House, and accepted a position with the Joliet Iron and Steel Co. Fred. Krusemark takes the vacated place at the Palmer House. Superintendent Wilson, following the example of O. H. Booth, and assisted by the entire official corps of this office, are making strenuous endeavors to ascertain if there is a league, who are members, and all else relative thereto. Go on, gentlemen, you are more successful canvassers than those who have the subject in hand. A few more inquiries (I mean persecutions), and you will swell the numbers to an amazing degree. Suspend a few more on suspicion, accuse them of willfully lying, and berate their gentlemanly instincts just a little while longer, and you will do the fraternity a service for which, at no distant day, they will heartily thank you for having united them firmly and inseparably in a determination to protect themselves against such unjust and uncalled for persecution.

XERXES.

A Defaulting Manager and Confidence Operator.

H. B. Breed, manager of the W. U. Tel. Co at Harrisonburg, Va., decamped from that place Aug. 14th, taking \$85 of the company's money, and leaving unpaid bills to the amount of from \$150 to \$175. On the previous day he played a confidence game in the following manner: Breed wrote a bogus message and sent it to John G. Effinger, one of Harrisonburg's most prominent commission merchants, purporting to be from M. L. T. Davis, a prominent commission merchant of Norfolk, Va., with whom Mr. Effinger has large business transactions. The message was as follows:

NORFOLK, Va., August 13.

JNO. G. EFFINGER, Harrisonburg:

Send by to-day's express, without fail, two hundred and forty-two dollars to Geo. B. Boylin, Ivy depot, Virginia. I will remit you Friday. Answer. 25 paid.

M. L. T. DAVIS.

Mr. Effinger replied that he would send the money as requested. Breed then left Harrisonburg on the morning of the 14th in a buggy for Mr. Crawford, and there took the V. R. R. train to Staunton, thence by the C. & O. way train to Ivy depot, calling for and describing package, whom to and from, amount, etc., and producing letter and telegram in the name of Geo. B. Boylin, and representing himself to be a grain merchant, received the package and left again on the same train. It is thought that he has gone to Concord, N. C., as he sent his wife and child to that point four or five weeks previous to his departure. Breed is about twenty-eight or thirty years of age, about five feet four inches in height, very bow-legged, dark hair, eyes and moustache, and very dark complexion; scars on side of neck and on under lip, nervous twisting about corner of mouth while talking; is a great talker and considerably dissipated; has an exceedingly bad face, and is offensively familiar on short acquaintance. He claims to be from Louisiana. Is a musician, photographer painter, printer, and quite a genius generally. The office is now in charge of Miss Kuyck, from Waynesboro, Va.

CECIL.

A Pleading Incident.

On the afternoon of August 16th an affair of an unusually pleasant character occurred at the office at 12 West Twenty-third Street, this city. Mr. Wm. H. Drake, lineman, who has been located at this office since its opening, and previous to that at the old Madison Square headquarters, was made the recipient of a handsome testimonial in the shape of a rather unique marble statuette. The matter had been under consideration for some time, and it was with no little difficulty that a suitable and expressive work of art was at last procured. The gentleman in charge of the office, on making the presentation, said that it afforded him uncommon pleasure to be

associated with his companions in an endeavor to show their appreciation of a man who, in spite of the fact that he was always seeking trouble, and was never happy except when he found it, was nevertheless a most worthy and estimable member of the community. He embraced the present opportunity of saying that though it was a well known fact that Mr. Drake often found it necessary to be on the "ground" when he was obliged to work at "cross" purposes, it was always repugnant to his (Mr. Drake's) feelings as a gentleman, and he (the speaker) was gratified in being able to make this statement in this public manner. In conclusion, he said that it was the earnest wish of himself and brothers that Mr. Drake's career might be in the future as satisfactory to himself as it had been to his friends in the past.

W.

The Microphone.

It is generally conceded that Mr. Edison must have been laboring under a serious misapprehension when he accused Professor Hughes of piracy, and Mr. Preece of abuse of confidence, in connection with Hughes' microphone. Referring to this matter, Sir W. Thomson, who, it will be remembered, was one of the judges at the Centennial Exhibition, and who has taken a lively interest in recent telegraphic, telephonic, and other electrical discoveries, says, in a late contribution to *Nature*:

"The pleasure with which those beautiful discoveries and inventions, the telephone, the phonograph, and the microphone, have been appreciated by the world, has been unhappily, and I must say I think unnecessarily, marred by one of the most disagreeable things that can be thrust on the public—a personal claim of priority, accompanied by accusations of bad faith, especially when made against any one of whose name and fame the public has come to feel concerned. Before troubling the public at all with such a matter, Mr. Edison might surely have reasoned out his claim with Mr. Preece, with whom he had been from the beginning in correspondence, or he might have written immediately to public journals, calmly pointing out the close relation between his own 'carbon telephone' and Mr. Hughes' subsequent 'microphone.' The scientific public could then have calmly judged, and would have felt much interest in judging, how much in common or how much not in common there may be in the physical principles concerned in the two instruments. But by his violent attack in public journals on Mr. Preece and Mr. Hughes, charging them with 'piracy,' and 'plagiarism,' and 'abuse of confidence,' he has rendered it for the time impossible for either them or others to give any consideration whatever to his claims. Nothing can be more unfounded than the accusations. Mr. Preece himself gave, at the Plymouth meeting of the British Association last August, a clear and thoroughly appreciative description of Edison's carbon telephone, and published it in the printed reports of his lecture which appeared in the public journals. The beautiful results shown since the beginning of the present year by Mr. Hughes with his microphone, were described by himself in such a manner as to leave no doubt but that he had worked them out quite independently, and that he had not the slightest intention of appropriating any credit due to Mr. Edison. It does seem to me that the physical principle used by Edison in his carbon telephone and by Hughes in the microphone is one and the same, and that it is the same as that used by M. Cléragé, of the French 'Administration des Lignes Télégraphiques,' in the 'variable resistance carbon tubes,' which he had given to Mr. Hughes and others, for important practical applications, as early as 1866; and that it depends entirely on the fact, long ago pointed out by Du Moncel, that increase of pressure between two conductors in contact produces diminution of electric resistance between them. I cannot but think that Mr. Edison will see that he has let himself be hurried into an injustice, and that he will, therefore, not rest until he retracts his accusations of bad faith publicly and amply as he made them."

It seems, according to the *Telegraphic Journal*, that the French Jury were uncertain whether to consign the phonograph to Class 15, Instruments of Precision, or Class 65, Telegraphic Instruments, in the Paris Exhibition, but they finally relegated it to the latter, on the consideration that it can serve as a recorder of telephone messages.

Harrisburgh, Pa., Western Union Office.

The operators of Harrisburgh are a happy band of seven, preserving an unwonted equanimity this weather; in decided contrast to the stirring times of this time last year, where, between the heat and the strike, tired nature was on the verge of dissolution. In point of seniority, Mr. R. B. Ziegler, the veteran, stands first on the list, and, although visibly affected by the "heated term" now upon us, manages, notwithstanding, to keep the official machinery in good working order, to the great satisfaction of all concerned. Next in order is Mr. Chas. A. Bigler, whose even temper it is hard to ruffle, and whose geniality wins him hosts of friends. He is a first-class operator, moreover, and one impossible to "stick." The third on the list is Mr. E. A. Teupser, whose obesity entitles him to the name of the "heavy man of the office." The fact that he is now a Benedict, adds materially to his importance.

The next to claim attention is Mr. V. P. Smith, whose unflinching good nature amid trials and difficulties, is the wonder and admiration of the office. His serenity is as refreshing as it is rare. Only the other morning he came on duty, his face beaming with delight, evidently trying to control his excitement. Still we "gazed, and still the wonder grew," until it was whispered around that he was a father. Proud man! Mr. H. W. Spahr, whose post is at the depot, discharges the duties pertaining to that office in a manner that defies criticism, and not only reflects credit on himself, but on the company he represents. F. P. Coates, surnamed "the special artist," is a recognized institution in "H" office, and has few superiors in penmanship in this vicinity. Mr. W. H. Boggs is a large hearted fellow, all cavaliers to the contrary notwithstanding. C. S.

Telegraphers' Rifle Club.

The second competition for the Sharp's mid-range rifle was held upon the historic grounds of the Hastings Rifle Range, at Mott Haven, N. Y., Saturday, Aug. 17th, and proved to be the most interesting competition yet held by the club.

The scores, with few exceptions, were remarkably fine, and would have done credit to "crack" rifle clubs. Mr. C. D. Haskins won the rifle for a second time after an exciting contest with Mr. M. W. Doran.

This competition was peculiarly interesting from the fact that Mr. Doran had made the highest score up to the time of Mr. Haskins' appearance upon the grounds. When it was discovered that Mr. Haskins had not entered for the match, and could not fire under the rules, Mr. Doran magnanimously waived his right to object, and the members of the Executive Committee present unanimously voted to suspend the rules and allow Mr. Haskins to fire. The following are the scores:

M. W. Doran.....	43	B. D. Mitchell.....	31
C. D. Haskins.....	43	A. La Bine.....	25
E. S. Leacyroff.....	41	G. Hauser.....	23
H. Baer.....	40	T. Larbig.....	21
A. Metzger.....	38	J. Strner.....	20
J. J. Metzger.....	37	W. Lockert.....	8
A. A. Knudsen.....	36	N. Uchmann, not firing.	
Ties—			
C. D. Haskins.....	21	M. W. Doran.....	19

Congress Park in Saratoga has been lighted by electricity.

He was from the country, and he came down town for the first time. As he looked at the telegraph wires he said: "Why do you make your wire fences so high?"

We are glad to observe that a notable reduction in the price and rental of telephones in England has been made by the recently organized Bell Telephone Company. The former suicidal rates charged for the use of telephones in this country was a matter of regret to all acquainted with the subject. "Make hay while the sun shines" should be the motto of successful inventors; and, as even the telephone may be improved upon or superseded, it was felt that Prof. Bell was losing the harvest which his genius and labor had earned for him. Single telephones for experimental and lecture purposes are now sold at £2 (\$10) apiece; a pair of domestic telephones with battery, call bell, switch, and fifty yards of wire, at £5 10s. (\$27.50); a pair of business telephones with auxiliary apparatus, and 100 yards of wire, at £7 10s.; mining telephones at £15. Higher styles of telephones than these are charged for at various rates up to £20. There ought to be a wide field for the local use of the telephone in this country, and we are certain that nothing but the high prices hitherto charged for them has stood in the way of their rapid spread.—*Telegraphic Journal*.

PERSONALS.

Mr. A. M. Kemp, of Provincetown, Mass., was in town last week, and favored THE OPERATOR office with a call.

Mr. E. D. Carlile has been appointed manager of the A. & P. office at Columbus, Ohio, vice J. S. Williams, resigned.

Mr. Thornwell Fay, of Algiers, La., has resigned and gone into the country. Frank Somerindyke fills the vacancy.

Mrs. E. A. Hunter, of Danbury, Conn., who has been spending a short vacation in Canada, has returned to duty.

G. P. Bush, formerly night operator at Camden, N. J., has been appointed manager at Merchantville, N. J., the vacancy being filled by H. K. Weiler.

It was last week reported that operator "Patsey" Ayres, of Memphis, had yellow fever, but it turned out that he was only suffering from bilious fever.

Several of the W. U. operators in Memphis, among them Mr. Paola, an old-timer there, resigned, upon the appearance of yellow fever in that city, and fled.

Mr. J. W. McDonald, of W. U., Cincinnati, a well-known telegrapher, has braved the dangers of yellow fever at Memphis, and accepted a situation with W. U. in that city.

Frank R. Place, late assistant at Sherman, Texas, has been appointed manager at Hot Springs, Ark. Frank deserves the promotion, and was universally popular in Texas.

Messrs. A. W. Dennett and A. S. Ayres, of the W. U., Vicksburg, Miss., resigned their positions and have left the city. Ayres has accepted a place with W. U. at Memphis.

Mr. Wingate Wire, the operator reported in our last issue as stricken down with yellow fever at Port Eads, South Pass of the Mississippi, has, we are glad to hear, recovered.

The work in the New Orleans W. U. office is unusually heavy, owing to the stoppage of mails by the quarantine restrictions, and the force there is very much overworked.

John McNabb has resigned night report wire, Galveston, Texas, to frusticate awhile on his farm near Austin, Texas. Harry Austin, formerly of New Orleans office, takes his place.

A sending match is on tapis at New Orleans, between Dr. Wolfe, of that city, and Mr. Scheible, of Mobile. Stakes \$100. The match will probably come off after the yellow fever is over.

Dr. T. Jeff. Woolf, of the W. U. office, has been called into active service as a physician by the prevalence of fever, and is rendering efficient service to the sick in that city. He is very successful.

The Western Union office at Boothbay, Me., is presided over by Miss Carrie B. Duntion, and the signal department recently established, by Mr. John O'Brien, formerly of the E. R. R., Great Falls, N. H.

Messrs. James B. Hunter, C. E. Forshey, James L. O'Connor, and W. S. Hunter, operators on the city police line, New Orleans, have resigned. Mr. Fred W. Gustine, Jr., has been appointed operator same line.

Mr. Tharp Westerfield, of Morgan's R. R., New Orleans, has gone to the country for the summer. Mr. John Melton, of the C., St. L. & N. O. R. R., New Orleans, has done likewise. Mr. J. B. Hunter fills the latter's place.

Telegraphers north of the Ohio and Potomac Rivers are earnestly cautioned not to consider any offers to accept situations south during the present fearful epidemic. The type this year is especially virulent, and scarcely any unacclimated persons escape it.

N. H. Foster, of Covington, Indiana, writes requesting us to say through THE OPERATOR that C. H. Foster, Supt. of Telegraph of the I. B. & W. R. R., and himself are not relatives, so far as either is aware, and that the latter has nothing to do in regulating his (N. H.'s) salary.

Messrs. A. E. Chantler and P. A. Rodgers have returned from their eastern trip, having fully enjoyed themselves. Mr. Chantler is subbing for Mr. W. C. Albee, night train dispatcher for the St. P. & P. R. R., at St. Paul, Minn., who is off on a six weeks' vacation. Mr. F. P. Reeves keeps Mr. Chantler's place warm for him at Minneapolis.

The Belton Telegraph Co., E. B. Drane, Supt., has completed its wire—about eighty miles. C. W. Sheldon is in charge of Georgetown, Texas, George Appleby of Salado, Texas, and H. Ham of Round Rock. Mr. Drane holds down Belton for the present. This new enterprise is the result of the personal efforts of Mr. Drane, who deserves great credit for his energy and perseverance.

TORONTO BRANCH G. W. R.—Mr. Crombie, Jr. is still located at Toronto Junction. W. B. Albertson has been transferred to Burlington. Mr. W. Grayson, for some time operator at Burlington, has settled down for a few months at Hamilton, "S" office. An office has been opened at Minneo, with Mr. Davis in charge. Business is good on the Toronto branch, and all the operators are unanimous in favor of a protective organization.

A special to the Galveston News says that a traveling telegrapher named Ransom Parks died from chills and neglect at a deserted house eight miles below Willis, Texas, August 24th, and was buried by citizens the following day, Sunday. His brother is manager of the Western Union office at Stirling, Ill., and his father is in the Western Union service in Chicago. He was entirely destitute, and when found by section men, had been without nourishment for four days, too proud to beg.

IOWA MIDLAND RY.—A. Townley holds the fort at Auamosa. E. H. McGinty, operator and agent, Center Junction, is the happy father of a recently born boy. R. L. Bedell waits lightning at Onslow. E. B. Arnold is Monmouth's gentlemanly agent and operator. A. Z. Harmon sends and receives Maquoketa messages. H. H. Conn could not live in a state of single blessedness any longer. We hope he will enjoy himself in the matrimonial. J. G. Graul, with his assistant, A. Day, manages to keep the ball rolling at Charlotte. G. W. Curtis handles freight, etc., at Bryant. C. H. Reeves sells tickets and answers calls at C. C. & D. Junction. Miss A. Carpenter works the wires at Lyons.

Mr. Harry O'Neill, until recently clerk at the Western Union Telegraph office at the Continental Hotel, Philadelphia, who met his sad fate at Long Branch last month, was buried from his mother's house, 23d and Madison streets. The services were held at the Church of St. Charles Borromeo, 20th and Christian. Among the floral decorations there was a beautiful pillow and cross from the telegraphers, among whom Mr. O'Neill was a great favorite. There were also a harp of flowers and a handsome pillow, with the word "Papa," from his little daughter. The following telegraphers acted as pall-bearers: John A. Henneberry, Herman W. Schussler, Frank Gessner, William F. Jones, and John Z. Hemer. An affecting incident occurred at the cemetery, where, by a strange coincidence, Mr. O'Neill's remains were placed in the same vault and directly opposite the coffin of another deceased telegrapher, Mr. James Henneberry. The two were friends and co-workers in life, and it was with many sad feelings that their fellow laborers left them to their companionship in the grave. Mr. O'Neill was a very charitably disposed young man—ever ready to help a friend in need, and it was mainly owing to his exertions, a year ago, that a train load of telegraphers went to Trenton to attend the funeral of Mr. Jesse Mills.

MARRIAGES.

TALTAVAL—WOOLSEY.—August 20, at the residence of the bride's father, Sandusky, Ohio, Mr. Thomas R. Taltavall, of the Associated Press, New York, to Miss Lillian Woolsey.

DEATHS.

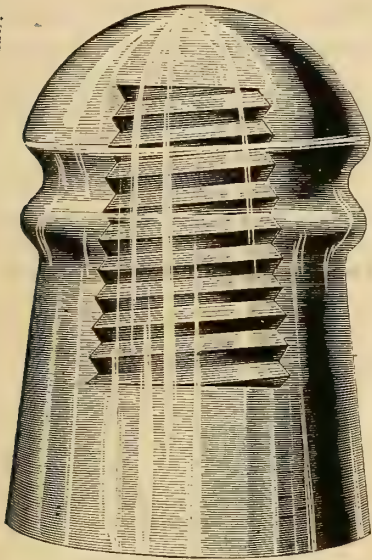
August 22, at Hunter's Point, L. I., of cholera infantum, the infant daughter of Mrs. D. Foiles, nee Miss May Britain, formerly of the Dry Dock office, this city. Aged five months.

August 23, at Minneapolis, Minn., of consumption, Frank H. Thomas, operator in train dispatcher's office, M. & St. L. R.R. Aged 18 years.

Mr. Thomas was a young man of more than ordinary intelligence and ability, and a very expert operator. His sterling character, quiet and gentlemanly demeanor, and generous disposition made him a general favorite, and a host of friends deeply deplore his untimely decease, and extend their heartfelt sympathy to his afflicted parents.

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Highly amusing.—*N. Y. Times.*
Bright, witty, and full of humor.—*Publishers' Weekly.*
The stories are short, bright, well written, and possess a flavor of originality really attractive.—*N. Y. Telegram.*

The best fancies of a fertile brain, smooth in style, and epigrammatic, but not flashy. There is in them all a quiet undercurrent of quaint dryness, that is irresistibly attractive.—*American Bookseller.*

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VOL. IX.

NEW YORK, SEPTEMBER 15, 1878.

No. 18

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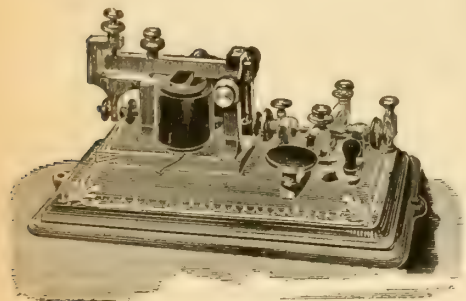
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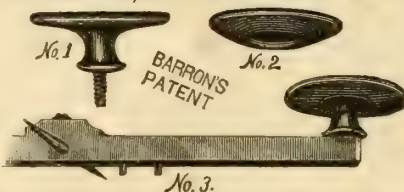
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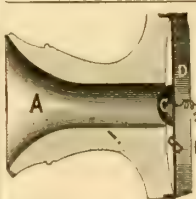


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THE OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY

September 15th, 1878.

Volume IX.

Whole No. 110.

Old Joe's "I, I."

Joe Brown hesat in his easy chair,
With his feet upon the table bare;
And smoked his pipe while he bent his head,
To listen to what his soulder said.

The hour was late when the wire grew still,
When he loaded his pipe with another fill,
And turned about in his easy chair
With a quiet, contented, aimless air.

And said to himself, "When I've done this pipe,
I'll call up 'X,' and say 'Good-night;'"
But his eyes grew heavy with want of sleep,
And ere he knew it he slumbered deep.

Now a jovial party sat up that night,
And toasted themselves in the coal fire's light;
They smoked their weeds and quaffed their wine
At a station below called "Number Nine."

There was "Q" and "M" and the line boss there,
Who would spin great yarns, and laugh and swear;
Said he "Let's play a trick on Joe—
I wonder if he's asleep or no?"

Then he called to Joe and said, "Your wife,
Poor thing, has lost her precious life
In a railroad smash-up that happened to-day,"
But nary a word would old Joe say.

Then "Q" informed him he'd cash on hand
That only awaited his demand;
But Joe slept on—"Can it be he's dead?
It must be so," the line boss said.

Then "M" bethought him that he would try
If he could get old Joe's "I, I."
He wrote a word, and the word was "Gin,"
"I, I," said Joe, "please send her in."

NEMO.

Telegraphic Victims of the Yellow Fever.

Since our last issue the dread scourge of the South, yellow fever, has wrought sad havoc among the telegraphers of that section. It will be remembered that we then gave the names of all operators attacked up to that time, with the condition, received by telegraph, of those in New Orleans up to the time of going to press.

We now continue the record from that point:

Mr. E. W. Barnes, W. U. manager, New Orleans, who was then reported as very low, died Saturday, August 31st. Mr. Barnes was very restless during his illness, and for that reason it was impossible to save his life, although every attention was paid him. Yellow fever patients who do not rest quietly rarely recover. The deceased, who was 49 years of age, was born in Staplehurst, Kent, England. He came to this country about 30 years ago, and was one of the oldest telegraphers in the country. Mr. Barnes' eldest daughter, Harriet, aged twenty years, died September 10, and also his second daughter, Matilda Isadore, aged thirteen years, on the following day.

On Sunday morning, September 1st, at half-past eight o'clock, Mr. W. M. Redding, the plucky telegraph operator for the railroad company at Granada, Miss., who had nobly stuck to his post until the fever had depopulated the town, breathed his last, and an hour and a half afterward all that remained of him lay in the grave, followed thither by no living soul except the hearse driver and a negro boy on the driver's seat. On occasions like this there is no time to follow friends to their last resting place. The sick demand all the time and attention that those still alive can give them.

The Grenada correspondent of the New York Herald says that Mr. Redding was a native of Marshall County, Miss., and about twenty-three years old. He was ticket agent and telegraph operator for the railroad at Grenada for the past four or five years, and an efficient, prompt and reliable employe, high in the estimation of his superior officers, tem-

perate in his habits, and attentive to his duty. He was a favorite with all who knew him. His death soon followed the shaft which laid him low. He was taken sick in the afternoon of Friday, and died on the morning of Sunday—not three days sick. Mr. Redding had been the New York Times correspondent up to the time of his death, which was received with grief all along the road.

Mr. Thomas F. Marshall, Western Union manager at Granada, whom we last issue reported down with the fever, also died September 1. Mr. Marshall had lost three children by the fever before his death, and another was sick. The telegram from Granada to the effect that one of his children had lain unburied three days for want of money, referred to in last issue of THE OPERATOR, turns out to have been incorrect. No dead are allowed to remain even three hours unburied. A Grenada telegram to the St. Louis Post, says that Mr. Marshall's widow has lost her father, mother, uncle, aunt, husband, and three children, and is almost distracted. Her conversation is wild and disconnected.

Sergeant William McElroy, of the Signal Service, who sacrificed his life in the effort to alleviate suffering, working night and day, and considering no place too humble to visit, died at Memphis, Sept. 1.

Marshall and Redding being dead, and Heaberg, who had volunteered to help Redding, sick, Grenada was without an operator for three days, after which one was sent from Jackson, Miss., to remain until the Company could furnish a man who had had the fever this year. The veteran Superintendent, David Flanery, well-known and respected throughout the South, whose headquarters have recently been at Richmond, Va., volunteered for service wherever needed, and was sent to reopen the Western Union office at Grenada. Mr. Flanery has been identified with the telegraph business in New Orleans and elsewhere all his life, and in fever times has constituted himself a nurse and personally cared, on many occasions, for his sick and dying operators.

Mr. J. W. Honsaker, of New Orleans, having consented to go to Grenada, Mr. Flanery left him in charge of the office, and went himself to reopen the Holly Springs office, the operator at that place, Mr. Mosby, having fled from the fever.

Among the deaths at Vicksburg, September 4th, was that of J. F. Tenney, U. S. Signal officer. Alexander Seales, Acting Signal officer, was taken sick same day, as was also operator J. W. Alvis, of Chattanooga. The latter died Sept. 10. C. M. Carr and George Lennox, operators from St. Louis, volunteered and went to Vicksburg for duty, September 1. Both were taken sick, and Carr died Sept. 13.

On the 5th, Martin Keyer, one of the volunteer telegraph operators from Louisville, died at Memphis, and John I. Connolly and E. W. Gibson, operators, were stricken down. Connolly died September 10th. The force at Memphis was then greatly reduced, the chief operator having but one assistant during the day and two at night. All have done double duty since the fever commenced.

Mr. Fred. B. Moxon, a well-known and highly esteemed telegrapher, lately in the employ of the A. & P., at New Orleans, died in that city on the 6th. As reported in last issue, Mr. Moxon was the first operator stricken down in New Orleans, but was convalescent, and expected to resume duty on Monday, September 2d. Persons recovering from yellow fever, however, have a ravenous appetite, but must subsist for three weeks or so on almost nothing—bread and fruit, rice water, or water in which chicken has been boiled, and even partake but sparingly of that. On Sunday, Mr. Moxon, being imprudent enough to eat a little chicken, was immediately taken down again, and, as a relapse is almost, if not always, fatal, his death was only a question of time. He was nineteen years of age, and an excellent operator.

Mr. Hood, an operator, was taken sick same day at Memphis, and on that evening Louis Klotz, of Mobile, volunteered his services, and took the train for Memphis.

Mr. Allyn, a clerk in the New Orleans Western Union office, was taken sick Sept. 6.

Willis K. Woolf, aged twenty-one years, a native of Alabama, and an employe of the Western Union Telegraph Co., died in the same city on the 7th.

Mr. H. M. Goewey, an extra operator from Pittsburgh, was taken down at Memphis, September 8, and died Sept. 12th, and Mr. C. H. H. Cottrell, a well-known "old time" operator, and Thomas E. Graham, a clerk, both of the New Orleans Western Union office, were among the new cases on Thursday the 12th.

Operator W. H. Mynatt, bookkeeper D. Walsh, and the wife of Batteryman Clements, all of Memphis,

died 13th. The wife of operator J. J. Fowler, same office, is also dead, and operator Mulford has sickness in his family. Acting chief McDonald was taken sick on 11th. Several messengers are also sick. Manager B. F. Fortune, of Hickman, Ky., was taken sick on the 10th and died on the 12th. Mr. Ed. M. Pollard, of Pittsburgh, having volunteered, was set to take his place. A. W. Dennett, of the regular W. U. force at Vicksburg, who left that city on account of the fever, has been taken sick at Brook Haven, Miss., but is recovering. Manager H. B. Black, Brownsville, Tenn., was taken sick 16th. The wife of the late manager Barnes, of New Orleans, was sick, but is convalescent.

The condition of the sick at the time of going to press, received by telegraph, was as follows:

NEW ORLEANS.—Operators C. H. Smith, and J. H. Riddick; number clerk Allyn Wilson, and repairer F. X. Delplaine, convalescent. All the other operators sick in the city reported doing well.

MEMPHIS.—Operator Gibson, very low; operators McDonald and Mullins, doing well; operator C. R. Newell, at work; repairman H. E. Conley, doing well; check boy Chas. Wright, convalescent.

JACKSON, TENN.—Operator Lennox, doing well. PORT GIBSON.—Manager B. F. Grisholm, better, and at work.

GRENADA.—Operator Heaberg, improving.

A New Orleans subscriber, under date of September 9, says: As a matter of interest to the fraternity, it may be well to mention the fact that during the prevailing distress Messrs. J. T. Allyn, Cashier Western Union Telegraph Co.; W. W. Huck, Secretary American District Telegraph Co.; and J. E. McDaniel, agent Associated Press, deserve great credit for the efficient services rendered the various charitable relief associations. These gentlemen well represent their companies' interests during these trying times. Our operators generally are doing yeomen duty. Mr. Peter Vidal, who has charge of the Terpsichore Office of the New Orleans Local Telegraph (this office is in the centre of the most infected district), has bravely, and, so far, successfully maintained his position.

How to Make a Microphone.

A writer in the English Mechanic gives the following simple instructions for making a microphone:

"Go to a toy shop and buy a child's toy tambourine. Take a thin piece of white pine wood, say two inches by one and a half inches. With a pair of scissors cut a piece of thin sheet copper about half an inch broad, two inches long. Keep one end broad; cut the other by taking off the corners to a blunt point; drill a hole toward the broad end, large enough to take a small brass screw; at the other end another hole, but only large enough to receive the end of a small copper wire. Place this piece of copper thus shaped in a hand vice, and turn up to a right angle the pointed end to the height of half an inch. Now take another piece of copper plate the same breadth, a little short of an inch in length; turn one end up in the same way. Bore a hole in this to take a brass screw; get a piece of carbon; file it to one inch long, half an inch broad, two-eighths deep; drill hole through it for screw. Now place this piece of carbon across the larger piece of copper plate, and screw it firmly on the board, passing, of course, through the plate. Take the other piece of copper and screw it to the board at the other end. Two very small blocks of wood may now be cut, into which fix binding screws. With coaguiline fix these one at each edge of the tambourine, and then by the same process fix the board in the centre, with its two ends toward the binding screws. When thoroughly firm, bring a thin copper wire twisted into a helix, through the hole in the upright, and twisted firm to that hole. Bring the other end round the screw of the binding screw, and screw it well down upon it. You have thus connection with the carbon plate. Take a small file and cut a nick in the centre of the upright at the other end of the board, just deep enough to carry a piece of stout brass wire. Cut the copper in the same way as the other at the binding screw, in a line with it, the distance between the two copper plates on the board being about half an inch. You have only now to cut a piece of stout brass wire, which, falling into the nick, shall, by another nick in itself, so balance, that one end, filed to a knife edge, shall just touch the edge of the carbon. This is a long story to tell of what, when seen, is very simple. As to the effect, although I have purchased some microphones from well-known makers, and found them very good for a large field, for fly walking, etc., the tambourine I find far the best. If the tambourine was supported on four pieces of oak, I think it would improve it."

Concerning a Certain Prodigal.

(Concluded from last issue.)

"She was a good solemn girl," he began, "and I think her intentions were honorable all the time. I know, now, that she was not handsome, for her eyes were crossed slightly, and her cheek-bones were high, and her chin had a retiring turn—the face was kind of out of adjustment, as we would say telegraphically, and her hair inclined to redness; but she was as beautiful to me then as a flower, and I loved her very dearly. I was taking night report for the Western Union at Quincy, in Illinois, at the time, and saving some money every pay-day. I was expecting to be a man of family, you know. I had fixed in my own mind what kind of a house we would have, where we would buy our groceries, how the children would look and what we would name them (there were to be several of them, all girls), and a hundred other things that I'm ashamed to think of now. But it was all very real to me then, I tell you. Not that I ever spoke to Isabel—pretty name, wasn't it?—about such matters. Oh, no. We were a very sensible pair of lovers, I can assure you, and our courtship was painfully correct. There was none of the 'yon bright orb' nonsense about us. We weren't a bit spooney. We didn't turn the light down, nor hold each other's hands, nor say 'darling.' Not any. Once, only once, I put my arm around her waist, and might have kissed her, may be, but she looked squarely into my face, and said, 'You forget,' and that was all there was of it. I used to wish, sometimes, that she would be a little more demonstrative—one gets tired of mere words, you know, in 'business' of that kind—but perhaps—perhaps it was better as it was."

He paused and pressed his hands to his forehead, as if he feared the sweet memory would slip away from him in his talk; and I sat waiting for him to proceed, busying myself meanwhile with thoughts of a certain June-cheeked Juliet to whom I had myself played Romeo, and whose half-forgotten image his idyl had strangely restored to me there in the pensive starlight.

"Well," he continued, directly, "we were very happy—too happy, Cap.—too happy. If there hadn't been quite so much of it, it would probably have lasted longer. The truth is, I was so happy that I had to do something to tone it down—to weaken the current, you might say—and I took to drinking like a fish. I couldn't have helped it to save my life. Perhaps if she had acted a little warmer toward me, and I could have caressed and kissed her—been a little more ambrosial, you understand,—it would have made a difference with me. But I don't know—I don't know."

He relapsed into silence again, and there was only the dull fretting of the waters about the pier beneath us to disturb the stillness, until after several minutes he resumed—rapidly, now, and with apparent anxiety to have done with the subject:

"She bore with it month after month, as patiently as a nun; but of course she couldn't stand it always, and so she told me at last, not in anger, or bluntly, but with firmness, and yet sadly, I thought, that the time had come for us to part. It would have choked me to speak, even if speaking could have done any good, which it couldn't; so I simply took her hand a moment—it trembled, calm as she was—and bowing, went away."

He paused once more, and I was upon the point of rising, supposing he had said all he desired to say, but he motioned me to remain, and went on talking. "After that, I lay sick a long time,—eight weeks, they told me—with some infernal sort of fever, and the money I had saved went to the doctors. I pulled through, of course. 'Men have died from time to time, and worms have eaten them, but not for love.' I don't know how it was, but when I got up again, my brain seemed to be kind of incoherent—intermittent disconnection, you might say—and I couldn't get steady work, and finally they began to whisper around about sending me to Jacksonville—that's where the crazy asylum is, you know. Then I braced up, and the first dark night I jumped the town without saying a blessed word to anybody, and since then—well, you know the rest, or a good deal of it. But you didn't know—you would never have guessed if I hadn't told you—that it was too much happiness made me what I am."

With this last paradox, he turned partially aside, and I noticed that he was fumbling about his clothes, as if in search of something—tobacco I presumed. Presently he drew out from some inscrutable hiding-place an old creased and rumpled pocket-book, took from it a faded sprig of cedar, and handing it to me, said, with that glassy, cynical smile I had seen so often: "There's the rosemary, that's for remembrance. Pray you, love, remember." Then he told me that

Isabel had once given it to him, standing by the gate, and that he had carried it through all the long years as a memento of her. When I reached it back to him, he put it away again in the wrinkled old pocket-book as tenderly as if it had been a tress of hair from the head of a dead baby, and then, "I wonder if she ever thinks of me?" he said, quite seriously, and we walked leisurely up the long street together, neither of us speaking a word more until we came to the corner where we had to separate, and there we merely said "Good-night," and parted.

I did not see him again for some time, and when, at length, he made me another visit, in the afternoon of a mellow October day, he informed me that he was about to leave the town. "Our planet is dropping into its annual shadow," he said, with mock gravity, "and I must hide me away to fresh fields and pastures new. I want to commune with nature, you understand; to touch the earth, like Antæus; to eat haws, and smell the fall wheat; to mingle with the quails, and blue-jays, and woodpeckers, and all that sort of thing. Be good to yourself, Cap. Don't work too hard, and beware of the enemy which men put in their mouths to steal away their brains. Bye-bye." And before I had time to answer, he was out of my sight and shuffling down the stairs, leaving me in a mood that was nearer sadness than I would have cared to confess, and which, I fear, gave a downcast tinge to the *Commonwealth's* editorials for several mornings afterward.

He returned in about two weeks, strange to say, and solemnly asserted that he had only been "looking for a homestead." He was jaded, foot-sore, and, as usual, a little shabbier than before as to clothing. He had read, he said, in some real estate paper of a locality out in primeval Kansas where corn grew wild, live stock waxed fat on the mere superabundance of ozone, and every quarter-section had been neatly fenced with stone by the geological convulsions of past ages; and he had been hunting for it, intending to enter a homestead in it and become a gentle shepherd. He couldn't find it, though; and now he wanted a few days' subbing "to replenish his not very plethoric pocket-book," as he called it. But most of all, he said, he wanted to see the man who wrote those things he read in that paper.

The manager gave him a job, but the next Saturday he left again, without even the formality of saying good-bye to me. We heard of him, in a few days, cracking jokes with the boys at Junction City; then working a week at Parsons; then in the calaboose at Fort Scott, and somebody paying fines for him to keep him out of the chain-gang; and from Fort Scott he swung around, about the middle of December, to Topeka.

"Just glided in to pay my respects," he remarked, "and to tell you I'm off for the sunny South. I like you Kansas fellows ever so much, but I want to see the Magnolias."

That was all he said. An hour later, happening to look from my window, I saw him moving briskly down the street, which was also the state road, and, waving his hand to me, he disappeared.

He came back again, with the grass and the birds, the following spring. He had been to Galveston, he explained, and had worked his way north through Arkansas and the Indian Territory. Somehow the trip seemed to have disappointed him. He talked gloomily about it, when I could get him to talk of it at all, and the very thought of it appeared to cloud his spirits like the haunting of some miserable dream. Perhaps the trouble was deeper than my shallow vision discerned; perhaps it came from within, and not from without at all. Sometimes I thought so, but knowing him as I did, the absurdity of the thing would creep in to upset such notions. And finally, when he came to me one night, with the old familiar quizzical expression in his countenance, and told me he wanted to talk to me about writing an obituary for him when he should die, I felt sure that he was recovering himself, and would soon touch his natural poise again.

"I hope you appreciate the honor I confer upon you," said he, "in selecting you to give me my final send-off. It's because I like your style; and I want you to tell just the barefooted facts about me—nothing extenuate, nor ought set down in malice." Don't speak of me as a "brilliant, but erratic" fellow, for that will simply mean that I was an awful liar. Don't say of me, 'He had his faults, as who of us has not?' because that is merely a polite way of telling that the deceased was a drunken sot. And if I die of the jim-jams, as I probably shall, don't say it was apoplexy, or paralysis, but call it jim-jams, plain and simple; I'll feel better about it if you do. I suppose there are a few good things you can say of me. Please say 'em as kindly as possible. And chuck in a little Shakespeare—if you can think of

something to suit. Of course you can't say anything about where I've gone; we can't any of us figure much on that, you know—everything's so mixed and uncertain over there. Genesis closes, you recollect, with a coffin."

Having thus bespoken my services, and indicated his preferences as to how the delicate task should be performed, he retired, humming to himself the breezy chorus of an old drinking song; and I thought but little, and that only in a ludicrous vein, of his singular request, until, some days afterward, the men in the telegraph office told me he was missing. Nobody knew when, or how, or why he had departed. Evidently he had stolen off in the night, not wishing to speak of his plans, if he had any; for we learned, on inquiry, that he had even omitted to settle with his too indulgent landlady. But on a blank lying on his desk he had written the words "Gone West, to grow up with the country."

I never saw him any more, and never heard from him, until I chanced one day upon a fugitive notice of his death. He was discovered, the paper said, frozen stiff and stark in the February snow and ice of a Minnesota prairie. Very oddly, it was a young lady who found him—some accidental Isabel, perhaps—and they took him into the nearest town on a wood-sled—the coroner and a few others—and then, I suppose, they dug a hole for him in the numb earth and put him away.

Alas, you poor, queer, dead-and-gone prodigal, where be your gibes now? Was it fate, or but your own folly, that beckoned you to an end so pitifully desolate? Did you meet death as you had confronted life—with that unflinching eye and that placid, masterful smile? And did they find, I wonder, in some whimsical recess of your ragged garments a poverty-stricken, old leather pocket-book, and a little sprig of faded cedar?

Here I might stop, content to let silence do the rest. But, recalling his injunction to "chuck in a little Shakespeare," and remembering, also, his skepticism and his waywardness, I deem it only meet and fair to add in his behalf that carefully charitable petition which the great monarch of thought puts into the king's mouth at the death-bed of Beaufort:

"Peace to his soul, if God's good pleasure be!"

A Letter from Superintendent Booth.

TO THE EDITOR OF THE OPERATOR:

Sir—I am indebted to somebody, yourself perhaps, for copies of *THE OPERATOR* containing strictures on myself, in connection with a circular recently issued over my signature, and which appears to have been christened "Sup't. Booth's Interdictory Edict."

Now, I do not write you for the purpose of explanation or apology. I believe the circular was called for, is right, and in accord with the best interests of the fraternity, employer and employed. It is now in full force, and will be carried out to the letter, so long as I control matters in my own district. I merely wish to remind you that, while you claim the "inalienable right of combination among employes for their own protection," a right which I concede in one sense, you cannot, by any consistent line of reasoning, deny me the right to use the necessary means for my own protection and that of my Company. That, when I meet as obstacles a combination or individuals inimical to the interests under my charge, it is a right and a duty you must accord me, on your own grounds, to save myself. I know of no better way to do it than the well-established one of dissolving partnership with those who work against me and not for me, and shall continue this policy until I know of a better.

And let me say right here, that an organization of employes that binds them to disobey their superior officers in any case that may arise, is mischievous, and not to be tolerated in the interests of discipline, through which employer and employed are alike benefited. When an employé assumes to say what shall be the proper method of conducting the business of an office, in opposition to the plain rules set down by his superintendent, it is time to make a change, and no superintendent is fit for his office who fails to do it. And this brings the matter between employer and employed to a well-defined point, viz.: Which has the right to control the business?

But I began this letter more particularly to set yourself and correspondents right as to my position, in which you have grievously gone astray. I am a superintendent of railroad telegraph. The employes under my charge are paid strictly by the railroad company; and in regard to the circular which you have honored with so much attention, it was sug-

gested by a high officer of the company, and received the emphatic approval of the chief official in the general management, and was indorsed by all others interested at the time, and since cognizant of the matter. If you are not satisfied with this backing, I am.

I have before me over one hundred letters from employés in response to my circular, and I will close this letter abruptly by asking you to print it herewith, as an evidence that one, at least, understands the full extent and possible result of these organizations, gotten up by uneasy and crazy agitators who hope in some way to profit by the confusion, without caring what misery they may inflict upon the innocent victims who listen to their sophistry:

[COPY.]

"Dear Sir—Your communication in regard to the reorganization of the 'Telegraphers' League' is to hand. My knowledge of this movement is confined to what I could glean from a specimen copy of THE OPERATOR sent me some days ago by the publisher. You have doubtless seen this paper, and are familiar with the arguments put forth by Mr. Johnston and others urging the fraternity to organize. About nine years ago I was induced to join the 'Telegraphers' League,' and belonged to it at the time of the great operators' strike. My experience at that time so thoroughly disgusted me with the concern that I resolved never to become in any manner connected with such an organization again.

"My first impulse, on reading this paper, was to write Mr. Johnston a communication advising operators to beware the sophistry of such arguments; but I concluded that he was so anxious to get the operators stirred up that he probably would not publish anything against it; so I withheld what I had to say, or might have said.

"I do not believe in strikes at all, and my voice has always been against them. I have seen a number, and never with any other result than that the strikers paid dearly for their rashness. In my opinion, the interests of capital and labor are identical, and my experience leads me to the conviction that true merit ultimately meets its proper reward; and the only true way for operators or other laborers to improve their condition is by striving to perfect themselves in their chosen professions—to become so expert and reliable that capital is compelled to offer a premium for their services. This is the only kind of war I have to make on capital.

"I consider this fresh outbreak in our profession as a sort of outgrowth of the communist doctrines, which political blatherskites and the bumper element are endeavoring to foist upon this country, the leaders expecting, by becoming 'the organ' of the clan, to reap a rich harvest, little caring what ultimately becomes of their poor dupes.

"Please excuse me for intruding so long a letter upon your time and patience. A wish to let it be understood clearly how I stand on this question has called it forth. Yours respectfully,

The foregoing is but a sample of many I have received, and I hope yourself and readers will profit by its sound reasoning. Very truly yours,

O. H. BOOTH.

International Telegraphy.

Some excellent results in the way of international communication by telegraph are expected to come from the International Conference to be held in London in June next. Chief among them will be the reduction and simplification of the system of tariff now in vogue in Europe, but more especially on the Continent. At present, as each country has a special tariff for communication with every other country, there is hardly a State, our own included, which, when sending a dispatch to foreign points by way of a third State, has not to sum up several charges, to calculate the cost of the dispatch. In addition to this, which necessarily increases the expense, the charge from one country to the other is in many instances extravagantly high, having been fixed at a time when no adequate conception of the extent telegraphic communication would obtain could be formed. Great dissatisfaction is also felt as to that worst side of the existing system, the twenty words limitation. The greater part of the telegrams actually sent might be compressed into fewer words, thus getting rid of the double disadvantage of unnecessary expense to the public and extra work for the officials. The British Government, seconded by the representatives from America, intend asking for the adoption of the pure word tariff already regulating England's intercourse with the United States and other non-European countries. These principles will, it is believed, be warmly sup-

ported by the delegates from Germany, and France, Austria, Italy, and Russia will, it is hoped, favor the proposition. The chief resistance is expected to come from Switzerland and Belgium, countries which, from their geographical position, are now deriving large profits from transit telegrams. Another question which will probably be considered is, as to the expediency of adopting a letter scale or syllable scale of charge in place of the present word scale, with a view to encouraging the use of short words, and thereby enabling the wires to convey a greater number of messages. There are many practical difficulties in the way of such a system, however, and its adoption by the conference is not at all likely. But the reduction contemplated in the words limitation will alone effect a saving of from 50 to 350 per cent. on each message sent from one country to another in Europe.

The Secretary of the International Conference, whose office is located at Berne, is constantly in receipt of information from all parts of the globe, to be laid before the London meeting. He has recently published some of the statistics thus collected, and we are thus enabled to contrast the results obtained by State management of the telegraphs in the Old World with those obtained by private enterprise in the New World. The statistics given as to the length of the lines constructed and worked by the various administrations show that, among the State telegraph departments, Russia is pre-eminent, having a total of 56,000 miles of line, of which 9,000 miles are in Asia. France ranks next, with 34,000 miles of line, while Germany has 30,000 miles, Austria-Hungary 29,000 miles, England 25,000 miles, India 17,670 miles, and Italy 14,000 miles. The proportion of miles of wire to miles of line varies very greatly in different countries. While the Russian lines carry on an average only two wires, the lines in England carry four and a half wires. The result of this difference is shown in the statistics of miles of wire, where England leads all foreign States with a total of 113,000 miles. Russia and Germany rank next, with 112,000 miles each. France has 90,000 miles, Austria 84,000 miles, Italy 49,000 miles, and India 39,000 miles. But these government lines are all eclipsed in length both of line and wire by the Western Union Company, which has 77,000 miles of one and 190,000 miles of the other in successful operation. In the number of offices open to the public the American company also takes the lead, with a total of 7,500. The nearest approach to this is in Germany, where there are 6,388 offices. England has 5,375, France 4,410, Austria-Hungary 3,240, Russia 1,965, Italy 1,860, Switzerland 1,053, and India 956 offices.

If we compare the number of offices with the populations of the various countries, we find that Switzerland has one office for every 2,535 inhabitants, while among other countries of the Old World the number of persons to an office is: in England 5,882, in Germany 6,689, in Sweden 7,054, in Denmark 7,716, in France 8,194, in Belgium 8,814, in Austria-Hungary 11,053, in Italy 14,421, in Russia 45,487, in Spain 60,073, and in India 251,671. The Western Union Company has an office for every 5,181 inhabitants, and when we remember that there are other private companies in this country, working lines of considerable extent in the aggregate, this must be allowed to be very remarkable for private enterprise. Excepting Switzerland, where many of the offices are on mountain tops, and can scarcely be said to be provided in order to meet the daily wants of the natives, there is no country in the world so well supplied with telegraph offices as our own.

As regards extent of business, that of the Western Union Company is hardly so large as that of England, but is greatly in excess of that of any Continental State. The number of paid messages transmitted by the Western Union is not stated in these Berne statistics. Those of England show 91,200,000 of paid internal messages. Germany, which ranks next among the State administrations, has only 42,000,000, France 36,000,000, Austria 26,400,000, Italy 21,600,000, Russia 17,000,000, Switzerland and Belgium 9,600,000 each, Holland 7,000,000, Spain 4,900,000, and India 4,000,000. In comparing the numbers of paid internal messages with the population of the respective countries, Switzerland ranks highest, with 80 messages for every 100 inhabitants. No doubt, however, this result would be considerably modified if messages forwarded by actual residents of the country were alone taken into account. England sends 60 messages to every 100 inhabitants, Germany 20, France 21, Italy 16, and so on down to Russia, which sends but 4.

In the matter of gross revenue the Western Union heads the list, with an income of very nearly \$10,000,000. England comes next with \$6,310,000. Rus-

sia has \$4,407,000, France \$3,255,000, Germany \$3,034,000, Austria-Hungary \$1,970,000, Italy \$1,445,000, India \$1,210,000, and Spain \$567,000. None of the other countries which have furnished returns has a larger revenue than half a million dollars from telegrams.

The most striking fact brought out by the statistics is that obtained from a comparison of the receipts and expenditures of the various States. Out of sixteen State telegraph systems for which these returns have been supplied, there are no less than ten in which the expenditure is in excess of the receipts. This does not include Turkey and Greece, from which two countries no returns have been received. Inasmuch as only a relatively small portion of the community derives any direct advantage from the telegraph service, it can hardly be considered a satisfactory state of things that any part of the costs of that service should fall upon the general taxation of the country. Some governments appear to be alive to this fact, and in several cases changes in the mode of conducting the business have been introduced, since the returns were made to the Berne office.—*N. Y. Times*.

That "Much Maligned" Gradation (?) Order.

I have just finished reading a communication in the last number of the *Journal of the Tariff*—I mean *Telegraph*—wherein a correspondent, after speaking very sensibly of the causes of the present low salaries of telegraphers, and "the dissatisfaction which arises from failure to secure promotion," and insisting upon the concession that "the service would be improved if a proper system of promotion for merit, ability, and length of service was established," adds: "In so far as the much maligned order for equalization of salaries and positions is calculated to accomplish this, it deserves the approbation and support of the employés."

I am aware that this is rather a late day to say anything concerning the "equalization" which long ago became an established fact, and as stubborn a fact as ever existed, but the correspondent's words aroused a feeling of indignation which must find vent in words. He does not, in so many words, say that this equalization *was* calculated to improve the service, although such was my idea on first reading, and may be that of others whose perception is no quicker, but at the same time it seems as if he *must* have intended to impress upon his readers that this was partly, if not wholly, the original calculation, else why would he have asked for its "support and approbation?"

Was the "equalization" calculated to improve the service, and has it done so? I answer no to both questions, and if anyone can show the contrary to be true, he is entitled to the thanks of the entire profession, for they were all, either directly or indirectly, affected by this order. If the company intended to improve the service by means of this "much maligned" order, they evidently did not think that fact of sufficient importance to be mentioned among the reasons given to managers for the change. In at least two cases (both known to the writer) the superintendent in charge gave as a reason for the reduction ("equalization" not mentioned) that the company "must reduce expenses," and although in every case the cloven foot did not appear, every operator in the country, who thinks independently of the official organ, is satisfied that the company's intention was to reduce salaries, consequently increasing dividends, and that the improvement of the service (if that means the employés) had no connection with the order, and was probably not thought of. The Vanderbilt family is not noted for devotion to their employés' interests, but rather to their own; and so long as they control the Western Union Telegraph Company, just so long will the employés' interests suffer, unless they protect themselves. Would not a sound protective organization effect this purpose? The old fable of Hercules and the wagoner will apply to us. Hercules told the wagoner to first help himself, and then call on him. If we first use our own powers, may we not then hope for some higher aid? If "equalization" means bringing the salaries of well paid operators down to the level of those of the poorly paid, then the company has been signally successful in their "improving" efforts; but if it means to grade the salaries according to the ability and value of their employés, then have they as signally failed. In either case the improvement of the service is entirely imaginary, for the only change in the condition of the employés is to make nine-tenths discontented, and long for an opportunity to escape from a profession where the reward for long and faithful service is a "sliding scale" and an "equalization," followed by—what? CHASE.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

September 15th, 1878.

THE Western Union Directors generally subscribed \$50 each for the relief of the Southern operators, as did also Gen. Eckert and Gen'l Sup't Van Horne.

ALL advance orders for "Sam Johnson" have now been filled, and we are ready to fill as many more as may come along. The book is a little larger than "Oakum Pickings," and looks well.

EXPERIMENTS with war balloons are going on at Woolwich, England, and are to be continued for several months. The telephone is used to communicate from captive balloons to a committee below.

THE only grand medals granted at the Paris Exposition for electrical inventions have both been carried off by America. Edison gets one, and Elisha Gray of Chicago, the other, both for telephones.

At a consultation of the officers of the United States Direct Cable Company, Portsmouth, N. H., Sept. 5, it was decided to change the bed of the cable leading from Rye Beach, and lay it further off shore, so as to clear the fishing grounds.

WE will send THE OPERATOR from September 1st, 1878, until January 1st, 1879, prepaid by mail to any address, for 35 cents; or we will send THE OPERATOR and THE Railroaders and Railway Enterprise, both prepaid by mail, for one year, on receipt of \$1.75.

RULE number 8 of the Green Bay and Minnesota R. R. Company, of which Mr. E. C. Belknap is train dispatcher, reads: "Students in telegraphy will not be tolerated on the lines of this Company." Give us your hand, Mr. Belknap. We wish every train dispatcher in the country would follow your good example.

THE cost of the Paris Exhibition buildings is set down at 50,000,000 francs, and the receipts for the entire show are estimated at 21,500,000, but it is estimated that the Government and the Municipality will indirectly derive a revenue of about 100,000,000 from it in the form of Customs duties, taxes on railroads, omnibuses, and cabs, stamps for telegrams and letters, and excise duties on wines and liquors.

WESTERN UNION stock has gone up still higher in price. It was favorably affected by the gratifying character of the quarterly statement of the company, showing that the surplus, after payment of the dividend of $1\frac{1}{2}$ per cent., amounts to \$665,512.29, against \$369,086.56 for the quarter ending June 30. The price is now 95 $\frac{1}{2}$. A. & P. sympathizes with the buoyancy of Western Union, and is now quoted at 31.

Superintendent Booth's Edict.

We publish in this issue a letter from Superintendent Booth, called forth by remarks in THE OPERATOR in regard to his recent mandate prohibiting operators under him from aiding in the alleged resuscitation of the "vicious" Telegraphers' Union. Mr. Booth tells us that the edict emanated, not from him, but from his superiors, and boasts that he is satisfied with his backing. He may be, but we know just exactly how much "backing" he has, and must say that if he is, few will accuse him of being particularly difficult to please in that respect.

The promulgation of the order, whoever was responsible for it, was a grave blunder, and would only tend to bring about what it sought to avert. No wonder the officers of the Pennsylvania Railroad dread any agitation among their operators. They pay them so miserably that if the operators were only permitted to think of their condition, about three-fourths of them would resign and hire out as day laborers, or some other paying business, and then the company might be compelled to pay twenty-five or fifty cents a month more to new men to take their places.

If Mr. Booth will take our advice he will embrace the earliest opportunity of dispensing with the services of the writer of the communication with which he closes his letter. Depend upon it, that man has an axe to grind. William Penn, in his advice to his children, warns them to "avoid flatterers, for they are thieves in disguise." It is evident to anybody, Mr. Booth, that that man is not honest in what he says, but is flattering you in the most barefaced manner. Not that he loves either you or the liberal company you represent, or has any conscientious scruples against joining a protective organization, but his soul yearns for the crumbs that fall from the superintendent's table, and to secure some of them he is ready to "indorse" the most preposterous order, even by a superintendent he abhors, for, as Antoninus says, "people generally despise where they flatter, and cringe to those they would gladly overtop." How affecting his reference to intruding so long a letter upon your valuable time and patience! He's a sly gentleman, that. Unquestionably he either understands human nature pretty intimately or has read that remark of South's: "Though they are aware that the flatterer knows the falsehood of his own flatteries, yet they love the imposter, and with both arms hug the abuse."

Let not operators waver in the establishment of a protective organization—if they consider it to their interest to have one—though every superintendent in the country issue an edict against it, and though every telegraphic Benedict Arnold in the world oppose it in letters of fulsome flattery to their superiors. Superintendents are paid for just such work, and, as one of them remarked to us in conversation recently, often receive orders to carry out that are very obnoxious to them, but must carry them out or make way for somebody else; while "men" of the Arnold stamp are better any place else than on the roll of such an organization. Yet telegraphers do not want to act recklessly in the matter, or on what is called "the spur of the moment," but should discuss the subject in all its bearings; see whether, all things considered, it would be judicious to organize, not for the purpose of making war upon their employers, but to protect and advance their own interests; to establish a better understanding be-

tween employer and employé, and to defend themselves from unreasonable reductions of wages and an overcrowding of the business by the wholesale manufacture of "plugs."

These are some of the objects that an organization, if there be one, should have in view. Its members need not expect to secure them except by months, perhaps years, of patient endeavor; but if they will only first lay a solid foundation, and then build slowly and carefully and without fainting by the way, they will even themselves in a short time be surprised at the progress they have made. They should give undivided attention, first of all, to the stopping, by all proper means in their power, of the over-production of embryo-telegraphers. There are too many operators of the lower grades in the business, and it would be a kindness to those likely to be brought into it by the rosy promises held out by irresponsible and swindling college professors, to meet them on the threshold, or before they commence to learn, and show them the condition of the modern operator in all its stern reality. If this were done, and careful attention paid, at the same time, to see that no students were taught at any telegraph office where it could be prevented, a very short time would show the enhanced value of telegraphic service, which, depending upon the law of supply and demand, will always command good compensation when it is scarce, and be poorly paid when there are two or three operators for every vacancy. Superintendents may be induced to co-operate in this reform by forbidding students in all offices within their jurisdiction, as many have already done. Few operators properly appreciate the difficulties under which superintendents sometimes labor. They merely carry out the wishes of their superiors, and when two or three of them get together, have as many complaints to talk over as have ordinary operators. Most of them at heart like the operators, and would help them if they could, so that the latter should not be too hasty in accusing them of unfair treatment. We often hear complaints against officials that an investigation shows to have but slight foundation in fact. The rumor in reference to the Western Union being re-imbursed by the Aid Association for its expenses in behalf of its sick operators is an example. Another one which may be cited recently occurred in which charges were brought against a superintendent and others, the accusers acting in perfect good faith, but on investigation we found that the real culprit had been discovered, and, after making restitution, discharged, while the others suspected were shown to have been entirely innocent. If any operator thinks he is badly treated by a superior, and desires it, we shall be glad to investigate the matter, and if injustice has been done him will try and have the matter remedied. In the meantime it does not pay to quarrel with those in authority over us, and we hope operators will not be so narrow-minded. Such an organization as is proposed would not countenance any wilful disobedience to proper authority.

Superintendents are hardly to blame for low salaries. Their own position depends upon their economy in this as well as in every other direction. The Executive Committee of the Western Union have everything to say as to how much employes shall be paid, and they must be held responsible. A young man of little previous knowledge either of business or the world has

by marriage, succeeded to the important position of head of the Western Union Telegraph Company, and probably has more influence than any other single person in shaping its policy. Being young, he is ambitious, not to ameliorate the condition of the employes of the company, but to increase the net earnings and enhance the value of the stock. The latter is commendable, but should not be indulged at the expense of the former. Possibly this man prefers to be considered a harsh taskmaster by his subordinates so long as he can make the footings come out right, and receive the plaudits of the stockholders; but let us hope that time will show him that there is a middle course to pursue whereby justice can be done both employer and employe: that it does not pay to forget the faithful services of old servants, and that low salaries is not always good economy. His company is in a prosperous condition; the net profits are greater and the price of the stock higher than they have been for a long time, and he can better afford to pay his employes living salaries, thus rendering them contented and solicitous for the interests of their employers, than keep them on starvation wages, ever grumbling and disinclined to do anything for the company that they can possibly get out of.

The Southern Pestilence.

In another part of this issue will be found a full report of the ravages of yellow fever among the telegraphers of the South, with the names of the unfortunate victims, and the condition of the sick up to the moment of going to press. It is a comfort to those who may have friends among the operating fraternity in the infected districts to know that the Telegraphers' Aid Association will care for and tenderly nurse all members of the craft, whether employes of the Western Union, A. & P. Railroad, Police, or any other line, who may be stricken down. About \$9,000 has already been subscribed by telegraphers and others for this purpose, and branches of the Association have been established at New Orleans and Memphis. New Orleans attends to cases south of Canton, Miss., and Memphis those north of that city.

It was stated in last OPERATOR that the Western Union Company would pay the nurses' and physicians' bills of any of its operators taken with the fever. We are since informed that the company only agreed to pay the nurses' bills. A rumor has been in circulation among the operators to the effect that the company was to be reimbursed by the Aid Association for amounts expended in this direction out of the funds subscribed. This rumor we investigated, and found that it arose from the misconception of a telegram sent by Mr. Van Horne. Acting Manager Alleyn, of New Orleans, telegraphed for instructions whether to pay the bill of Mr. Smith's nurse, 7.50 a day, out of the office receipts and charge it as ordinary expenses. It was thought best to let the Aid Association at New Orleans and Memphis disburse all moneys so far as practicable; Mr. Alleyn was, therefore, instructed to pay the bill of Mr. Smith's nurse out of the Aid Association's funds, and forward it to the Treasurer of the Western Union Company for refund, and some astute operator seeing the reply, misconstrued the message and started the rumor. Operators are very wrong in circulating rumors of this kind on such flimsy justification. The officers of

the Western Union complain that they are sometimes much annoyed by rumors that have their foundation, like this one, in a stray message passing over the wire, the men who start them thinking they detect something highly suspicious, because they know nothing more of the matter than is contained in the telegram, while if they saw the letter or telegram that called it forth, the reply would be perfectly clear and intelligible.

Every Northern telegrapher should coöperate with the Aid Association by getting up a subscription among his friends, both in and out of the profession. There are but few persons who would refuse to contribute at least a dollar, when they know that by their aid the Association will be enabled, if not to save a human life, at least to smooth the pillow of death. The Western Union volunteering to pay the nurses' bills of its own operators, and the A. & P. agreeing to follow its example, the expenses of the Association will be materially reduced, but still they will be very heavy, and it is hoped that a sufficient sum will remain from the subscriptions to pay suitable amounts to the widows of the operators who have died or may die during the pestilence. Therefore every dollar that may be contributed will be properly and judiciously expended, and operators should not relax their efforts in obtaining subscriptions, while those who have not already done anything should commence at once. Ask each of your friends for a dollar, and send the amount to Mr. R. H. Rochester, Treasurer of the W. U. Telegraph Company, notifying Mr. Van Horne of the remittance by wire.

We are proud to notice how nobly telegraphers have risked their lives for the public good all through this trying ordeal. Just think what scenes of desolation might have been enacted in the South had there been no telegraph to keep up communication with the outside world when the mails were quarantined against, and the anxiety of those who had friends there to learn the progress of the pestilence, and who were sick and who well. But the telegraph brought reports of the needs of the stricken cities, and physicians and nurses, and provisions and money, were liberally and promptly sent thither. It also afforded a grateful and priceless means of communication between the sick and their friends in the North, keeping the latter informed of every change in the patient, and carrying parting blessings from the dying or joyous tidings of recovery from the convalescent. All honor to the self-sacrificing men—it would occupy half a column to name them all—who have stood by their instruments in the face of death that they might be able to alleviate the sufferings of their stricken fellow-citizens. Though no public monument be ever reared over their remains, they have exhibited more genuine valor and courage than many whose names are inscribed high upon the roll of fame.

A DIVIDEND BY THE A. & P.—The Directors of the Atlantic and Pacific Telegraph Company met on Thursday, September 12th, and declared a quarterly dividend of $\frac{3}{4}$ of 1 per cent., payable September 30th; from the net earnings from the date of the pooling arrangement to August 1st. This is the first dividend ever declared by the company. The statements of the Secretary and Treasurer show that all debts previously con-

tracted have been paid off, and that a small surplus will remain after deducting the amount of the dividend. The figures were, by resolution, withheld from publication, but they are promised regularly hereafter, and so are similar dividends. All the above, however, is predicated on the settlement of the Benedict suit, and the payment by the Western Union Company of the Atlantic and Pacific Company's share of the profits of the pool, withheld since November last in consequence of that suit. The Franklin Telegraph Company, the only opposition line that ever previously paid dividends—1 per cent. in 1874 and 2 per cent. in 1875—is now paying 1½ per cent. semi-annually under its lease by the Atlantic and Pacific Company.

At a meeting of the of Board Directors of the Western Union Telegraph Company in this city on Wednesday, the quarterly report of the Executive Committee was submitted. The official returns for the quarter ending June 30, give \$8,689.47 less than the estimate. The correct balance at that date was \$1,077,703.96. There have since been expended \$708,620.40, leaving on hand \$369,083.56. The net profits of the current quarter partly estimated, are put down as about \$1,001,364.73. From this will be deducted for interest, construction, and sinking fund account \$179,000, and in payment of a dividend of 1½ per cent. \$525,936, which will leave a balance of \$665,512.29. A dividend of 1½ per cent. was declared payable Oct. 15, and the books were ordered closed from Sept 20 to Oct 16, for the purpose of the annual meeting of stockholders to be held Oct. 9.

Mr. W. R. Plum, who is preparing a history of the services of the U. S. M. T., during the war, was in New York last Tuesday, and called at the office of THE OPERATOR. He reports that he has recently visited and talked with all the U. S. M. T. operators in Cleveland, Pittsburgh, Cincinnati, Washington, Baltimore, Philadelphia, New York, and also at many intermediate points, who all promise their cordial assistance, and many of whom have already placed in his hands valuable contributions. He has a list of the names of about one thousand military operators, about one hundred of whom are dead, and the addresses of about two-thirds of the living.

SOME experiments have been made at Brussels in breaking horses by means of an electric arrangement known as the Engstram bridle. Through two reins electric wires run, and at the ends of the reins there is a small electric battery, under the control of the operator. By pressing a little knob the current acts upon the horse's mouth. Very intractable animals are said to become quite docile after receiving a few consecutive shocks; and when horses run away they may be brought to a standstill in a very short time by this arrangement.

A CORRESPONDENT wants to know where and of whom a phonograph can be leased for exhibition. Write to E. H. Johnson, 203 Broadway, New York. The number of agents, however, it is said, is now so large that more are not desired.

DURING a fog off the banks of Newfoundland, on a recent trip the steamer Faraday narrowly escaped a collision with an emigrant ship, which was only perceived in time by the aid of the electric light on the Faraday.

Tom Bligh.

Tom Bligh was one of the best boys that ever lived. Kind and warm-hearted as a woman, he'd give his last cent to the needy, and divide his last bite with the hungry. Witty and humorous, he used to keep us in a roar of laughter, night after night, with his brilliant sallies.

His copy was envied by all, and no matter whether copying twenty-five or forty words a minute, 'twas the same clear, straight, beautiful writing; and his sending, like his copy, was always the same—clear, steady, and musical. Often the manager would stand by, stroking his long beard, and looking into vacancy, as if charmed by that musical click, or listening to some one trying to run him down.

But poor Tom, whole-souled and kind-hearted as he was, had one great failing, which, like a big, black cloud, hung over him, casting its dark shadow in his path. His warm, impulsive nature was too susceptible to temptation, and at every vulnerable point sin aimed a thousand shafts. The social glass grew to be a habit, the habit a necessity, and soon a more devoted slave never bowed before the shrine of Bacchus. Will-o'-the-Wisp like, it lured him on, and when he tried to shake it off, laughed at him, and showed its master power by leaving him for a while shivering and shaking like a blasted reed at the mercy of the wind.

Promises were made only to be next morning broken; resolutions were formed to be forgotten almost as soon as made; and thus the days stole away, until at last came the climax which we knew was inevitable—Tom was discharged. From that day he became a "beat," roaming Bohemian-like from place to place—a three days' job in one office, a week's in another—till at last he was too well known to secure employment anywhere.

In the years that followed I saw him very seldom, and then usually by accident. He shunned his old companions as much as possible, for his spirit was too proud to let them see how low he had fallen; but even in his misery his better nature shone forth like the sun from behind a cloud. Naught but death could chill that warm heart or seal up that noble soul. Once I gave him charity—he didn't know who it was that gave. Presently I saw him give the amount to an old blind woman whose sightless eyes were eloquently pleading for alms.

But life's connections were fast wearing away, and its battery getting weaker and weaker; and when the spark was almost spent, he came back—a skeleton of his former self—to die. We nursed him as if he had been a brother, and tried to keep him with us, but death couldn't be baffled. One night I stole away from the office, and ran down to see him. He was very pale. Death had made its last call and wouldn't wait. He tried to speak, but his voice died away in a husky whisper. Then he took my hand, and using it as a key, tried to say something with his fingers. Slowly and shakily—almost insensible to the touch—came these broken words: "God bless you all! Good-bye." A shiver shook his frame—his hand dropped—his eyes closed. I felt his pulse—it was still. Life's current had ceased to flow—its circuit was broken.

In the churchyard of his old village home we laid him to sleep, and o'er his grave planted a tablet of flowers, which bloom as freshly and smell as sweetly as ever.

Poor Tom! Years have passed away since then, and few of the old crowd are left; but in the hearts of those who are, your memory is as fresh and green as it was on that sad July morning; and often in my musing hours that merry laugh of yours comes echoing back from the memories of the past. "Vic."

The Tellogastrograph.

So many inquiries have been addressed to us by persons suffering from deafness, in connection with some recent remarks on the megaphone, that we almost hesitate to bring before the public a still more remarkable invention, the tellogastrograph. It is almost needless to say this invaluable discovery comes from the United States, that happy land where mechanical ingenuity is incessantly producing startling novelties. The mechanism of the tellogastrograph is not described, but remains known only to the inventor, who wants a round sum for his secret beforehand, lest the British Telegraph Department should usurp his rights. Electricity, however, is the motive power, and the apparatus has wires attached to it; all the rest must be left to the imagination. But the inventor claims for his contrivance that by its aid people can eat and drink at several miles distance from their food and liquor. At least they can enjoy the flavors of what

ever delicacies are served up, and even become exhilarated with stimulants. The *modus operandi* is very simple. A dainty dish is placed in a receptacle connected with a powerful battery. To this latter wires are attached equal in number to the expected guests, and of sufficient length to reach to their respective abodes. At whatever hour is appointed for dinner each guest places his wire in his mouth, and forthwith tastes the full flavor of the *plat* at the other end. More than the flavor, for the inventor claims that by a recent improvement in the mechanism, it affords those who employ it a sense of repletion proportionate to the quantity of food consumed. The same is the case with wines, which convey their alcoholic effects through the wires along with their distinctive flavors. The best point of all remains, however, to be mentioned. No sooner are the wires disconnected from the battery than the surfeited recover their appetites, the intoxicated return to their sober senses, and the least remains nothing but a happy memory. It is not stated whether the viands and liquids disappear during the meal. If so, what becomes of them? If not, the invention will be simply invaluable to the Barmecide class of hosts, who by its means will be able to make the same banquet last for several days. What a pity the invention belongs to the land which indulges so largely in fiction!—*London Globe*.

Reading, Pa., Notes.

The P. & R. operators have erected to the memory of the late superintendent Sellers a monument which does them and the workmen employed upon it much credit. I wish your readers could see it. One of our operators is an amateur photographer, and will take an impression of it and send to THE OPERATOR. The monument was placed in position about two weeks ago. Speaking of it, the *Reading Times and Dispatch* says:

"The monument stands fifteen feet high. It is composed of a base four feet wide, two dies, a pedestal, and an urn, the whole made of Italian marble. The die resting on the base shows an admirably chiseled representation of the bend in the Reading Railroad at the base of the Neversink Mountain, just below this city. The double track and ties, the telegraph poles and wires, the undergrowth of bushes along the embankment, the river and the opposite side, form the picture, the principal feature of which is a storm-cloud over the mountain emitting a flash of lightning. The view is depicted with surprising fidelity. Under the sunlight the effect is quite realistic. The main die is the *pièce de resistance*. The lower section contains a full set of telegraphic instruments. The key is on the right, the sounder on the left, and the relay with every screw and thread, the coil-wrapped helices, and all the connections, are presented with artistic thoroughness, all in *alto relievo*. Portions of this monument display intricate and delicate workmanship. There is originality and boldness in the design, and masterly execution is stamped all over it. Above the telegraphic instruments is the following inscription, in a tasteful panel, in raised letters:

Calvin T. Sellers,
Died Nov. 24, 1877,
Aged 34 yrs., 4 mos., 22 days.

Erected by the Telegraph employees of the Philadelphia and Reading Railroad Company, as a mark of respect to their lamented Superintendent.

On the sides of the panel are inverted funeral torches. On this die rests a pedestal, with festoons of drapery, supporting a Grecian urn, which crowns the monument. The urn is ornamented with acanthus leaves and mediæval flowers. The monument has been erected on the southeastern slope of Charles Evans' Cemetery."

There is comparatively little said here about the projected, or suggested, telegraphers' association, though there have been a number of inquiries made about it and its progress. Decidedly the best article, to our mind, appearing in THE OPERATOR (that is, from a correspondent), was that rendered by our friend, Cervetes, in THE OPERATOR of August 1st, which, with some filling out and a few corrections, we think must find favor with all, superintendents and operators, and we think would be good material to work on for our talented brothers, Samson and Werner, instead of Plugmania, which, no doubt, is necessary, but which we can get too much of, as we are something of a plug ourselves. Some of the articles which have appeared in THE OPERATOR have had too much of the communistic air about them to suit the majority of our staid, slow Pennsylvanians, and especially we of the P. & R., who have seen the coal region strikers of 1874, '75 and '76 quenched, and the Brotherhood of Locomotive

Engineers discountenanced on our road. True, our pay is small, and we would favor any honorable, upright means of raising it; yet we give our officers credit for honesty, and doing the best they possibly can in the circumstances which these hard times have brought the country. That they have made miscalculations is self-evident at once to officers and employes, which we think the former will admit; but the calculations were made in good times, and above them, their coming to grief is the fault of the panic and later retraction of the U. S. Treasury Department; and as we are not bloated bondholders, we feel it to the bone. We hope for better times, when we are sure we can promise a greater number of subscribers to THE OPERATOR from this district.

Hurriedly,

DEAN.

Earth Connections for Lightning Rods.

The Electrical Society of the Ohio Valley has been discussing the subject whether a lightning rod not connected with the earth is as good or better for the purpose than one thus connected. Mr. John H. Shaffer, of Kankakee, Ill., having written Prof. Tice on the subject, the latter in reply says, among other things:

"It is not the business of the rod to conduct the positive electricity from the clouds to the earth, but to disarm the cloud by neutralizing its positive tension over the building it is to protect, by discharging negative electricity into it from the earth, so that no disruptive discharge from the cloud will take place. When a highly electrified cloud is above a lightning rod in a dark night, a brush of light is seen with a hissing sound to issue from the points. If it does not do so, then the rod is worthless, and worse than worthless. This brush of light is negative electricity discharging, and keeps the atmosphere in a neutral state above the house, and prevents a disruptive discharge from the cloud. The history of lightning rods is not that houses and churches are more frequently struck than before, which would be the case if the rod attracted and conducted the positive electricity from the clouds to the earth, but they are now struck less, not being one-tenth what they formerly were, and they are never struck, except when the rod does not perform its functions, or when a sudden demand is made upon it, which is more than it can do."

Referring to this, Mr. I. N. Miller, Vice-President of the Electrical Society, says: The Professor's letter appears to be circulated as an argument in favor of the Chambers lightning rod. There must certainly be some mistake about it, as this letter, if anything, is an argument against the rod. Mr. Chambers claims that the function of a rod should be to secure a discharge at one point, and diffuse it back into the air again at another point; or, in other words, to scatter the discharge and neutralize its destructive power. Professor Tice says: "The function of a rod is to conduct negative electricity from the earth to the cloud to neutralize its positive electricity, and prevent any discharge from taking place." If this latter theory is any confirmation of or in harmony with the former, it is entirely beyond my comprehension. If it is desired to convey negative electricity from the earth to the clouds, common sense would suggest that the rod be connected to the earth, and extend upward. But Mr. Chambers says that there is no such thing as negative electricity; that the expression "negative charge" means "the absence of electricity." Then, I presume, we are to infer that the function of a rod is to convey the absence of electricity from the earth to the cloud. A very brilliant idea. Or are we to understand that the Chambers rod, as constructed, is just the thing, and that the passage of a quantity of the absence of electricity from the ground to the cloud through a building can have no harmful results?

Chinese Cheap Labor in a Telegraph Office.

A fire broke out on Friday night, August 30th, in the rear of James Adams' carpenter shop, at 93 Hanson Place, Brooklyn, and extending to the adjoining two-story frame building destroyed both buildings; then, communicating with three two-story frame buildings in Fulton street, caused over \$6,000 damage. When the fire was first discovered, an alarm was carried to the American District Telegraph office, at 698 Fulton Street, but William Esop, the operator in charge, refused to transmit the alarm to the main office unless he received 40 cents. He insisted on receiving this amount, and in the meantime the fire gained much headway. At length a Maiden Lane diamond dealer offered to pay for the message, and then the operator refused to send it at

all, saying that "it was out of his line." One of the telegraph watchmen offered to run out with the alarm, but the youth in charge refused to allow him to go. The alarm was subsequently sent from the police station, but it was nearly half an hour after the fire was discovered, and the flames in the meantime had spread so that a second alarm and a double force of engines were necessary. There was much indignation in the vicinity at the operator, who might have telegraphed the alarm long before the police knew of the fire.

It seems a pity that there is no law to compel telegraph companies to keep competent operators in charge of their offices. Because they can save a few dollars by the transaction they will employ such excuses as Esop, who, when anything out of the ordinary run of routine business transpires, have as much presence of mind as a mule, though they retain all the latter animal's stubbornness. Had it not been for Esop's culpable stupidity much of this \$6,000 would have been saved. We only hope the telegraph company may be mulcted in heavy damages, to teach it and others a lesson.

Telegraphic Stratagems.

The *Baltimore American* says: "A story of heroism comes to us from across the Atlantic, anent the conferring of the red ribbon of the Legion of Honor upon Juliette Dodu. Juliette is a young woman, and was a telegraph operator at the town of Pithiviers during the German invasion of France in 1870. The German headquarters were established in her office, and took possession of the line for the purpose of sending and receiving dispatches. She was confined in the next room as a prisoner, through which the wires passed. She tapped them, and herself received the enemy's dispatches. By them she learned that a surprise movement on the French positions was intended. She managed to convey the information to her countrymen, who were thus warned in time to be prepared for the attack. After the lapse of eight years she is rewarded with the red ribbon. Exploits somewhat similar to that of Mile. Dodu were performed in this country during our war by operators attached to raiding expeditions of either army. On one occasion a column of Confederate cavalry turned the Federal lines in Kentucky and struck the Central railroad. An operator accompanying it tapped the line, and, using the signature of a Federal commander, telegraphed to headquarters at Louisville for a stock of supplies, of which the Confederate commissariat stood greatly in need. The quartermaster's department at Louisville, supposing that the requisition was all right, loaded a train with everything asked for, and started it down the railroad. The Confederate raiders quietly waited until it came along, captured the whole stock, and rode back to their lines in safety.

"This interference with the wires grew to be so common that the utmost caution was used to prevent deception. When Jeb Stuart made his raid around the Army of the Potomac in 1863 he cut the Baltimore and Ohio wires near Mount Airy, and also the Government wire that united Harper's Ferry with the War Department, running down the Chesapeake and Ohio Canal. A United States military operator was at Frederick Junction, and had a number of important army messages to be forwarded to Washington. Late in the evening the damage done by Jeb Stuart was repaired, and circuit east from Frederick Junction was obtained. The Junction operator immediately called up Camden Station, but could not persuade that office to hold any communication with him. The folks at the Baltimore end of the line knew that the Confederates had been on the road, and they suspected that this was one of their operators attempting to deceive them. In vain he protested, and spoke of the necessity of getting his dispatches off to the War Department. They stubbornly declined to take them, until at last a high official of the railroad, who was intimately acquainted with the man at Frederick Junction, was summoned to Camden Station. He was able to ask the suspected operator personal questions, the answers to which fully established his identity, and so the dispatches were at last taken, and got to Washington in due time."

The Government is building a military telegraph line from Fort Keogh, on the Yellowstone, to Deadwood, Black Hills, about 225 miles. The work is progressing rapidly, and telegraphic communication will be opened with the settlements on the Yellowstone, and around the Custer battle-field within a few months.

A Well Managed Office.

The fashion just now seems to turn on the telegrapher's ability to put a prodigious number of words legibly written in an almost incredibly small space. This good-natured rivalry, while it is not necessarily practical, seems to attract considerable attention. It has occurred to me that instances of individual success, embracing integrity, skill, superior management, and honorable records in our practical every day life as telegraphers, could be made as interesting reading, and certainly as inspiring examples for emulation. If you agree, I would like to instance the Pillow Brothers, Ben and Willie, manager and assistant of the Austin, Texas, Western Union office, and claim that theirs is the best managed office in the South; does more business for force allowed, is more prompt, in every way, and is generally through the conscientious work of the force, an ornament and example. As a feature of its self-adaptability to any emergency, I cite the fact that during the late Democratic Convention of seven days session, the Pillows, with one assistant operator, one clerk, and two messengers, promptly handled twenty-five hundred messages, and fifty-eight thousand words of special, beside regular daily report of three thousand words.

The ordinary average monthly is five thousand messages, and regular report, manager and one operator doing all telegraphing, bookkeeping, clerking, etc. During the meeting of the State Legislature, the average, with an additional operator is increased, together with seventy-five thousand words of special monthly. If two men can do this work, and make this record for themselves out of merely conscientious, manly motives, for a company like the Western Union, what would not similar men do for a company that could appreciate such devotion to duty! I would say that I do not know these men personally—only know their record as above, and give it as an example that I am proud of as a telegrapher.

GALVESTON, TEXAS, Sept. 7th.

Echoes from 197.

A lively little boy called on Mr. J. H. Lyman on August 30th. Weight eight pounds.

Mr. Pattison, who has been suffering from impaired eyesight, has entirely recovered.

F. W. Cushing, of the night force, is working on the second Chicago wire, days, having changed off with Gib Merrill.

George Waldron has been appointed relief operator on the Albany quadruplex, *vice* Miss Emma L. Ross, transferred to the Saratoga quad.

The services of about a dozen men who have been working extra during the past summer are to be dispensed with during the present month.

Messrs. Durivan, Raymond, Sawyer, and Charlie Miller, are back with us again. They have been revelling in the posity of the sea's song at Long Branch and Newport.

A correspondent writes to say that a man who goes into the yellow fever districts from the North, throws his life away. He has lived in the South for years, and would not go down there for money.

Thomas McKenna, aged twenty-three, a clerk in the operating room, died August 7, of pneumonia. The deceased was a favorite with all who knew him. Among those who attended his funeral were Messrs. Ford, Baker, Eason, Durant, Brown, and Bowers, of this office.

The regular monthly competition of the Telegraphers' Rifle Club for the championship badge took place at Zettler's Rifle Range, on Saturday, August 31st. Mr. Lockert, of the Western Union Factory, making the highest number of points, 45. The scores reached us too late for insertion in this issue.

Mr. E. Holland, formerly manager Pennsylvania Railroad telegraph office, at 526 Broadway, has been appointed chief operator of P. R. R. wires in New York city, and agent Pullman Palace Car Company, at 287 Broadway, *vice* F. C. Reed relieved. Mr. Holland is succeeded by Mr. F. M. Huntington, his former assistant, while Mr. Huntington is assisted by Mr. George B. Mason, formerly "extra" man.

At the meeting of the Board of Police last week, a communication was received from Gen. D. Wylie, Chief of the Ordnance Department, requesting permission to use the Police telegraph poles in making telegraphic connection between the State Arsenal at Thirty-fifth Street and Seventh Avenue, the head-

quarters of the First Division of the National Guard, the twelve armories in this city, and the Central Office of the Police Department. The permission was granted, provided no expense would be incurred by the Police Department.

Dashes Here and There

The light of lightning will penetrate through a distance of two hundred miles.

A flash of lightning at Morley, England, lately did terrible execution by striking a powder-magazine, which exploded with terrible effect.

At the close of 1877 the staff employed in the Italian telegraphic service comprised 4,549 persons. The length of the network in operation was 14,836 miles. The number of offices was 1,292, and the number of apparatus in these offices was 2,137.

Mr. George M. Seabroke finds that any sort of carbon, whether metallized or not, will serve as a transmitter for the telephone, provided that the vibrations will alter the points of contact; and he questions the theory that the action of the instrument is due to the change of the conductivity of the charcoal or carbon, or of the mercury globules either may contain, under the influence of the waves of sound.

STRUCK BY LIGHTNING.—The cable dispatches of Prof. Lockyer, the eminent English astronomer, in reference to the eclipse were badly "bulled" in transmission, and now the editors of *Nature* are wondering whether the words, "Corona probably photographed in Siam: Fluorescent eye-piece worked well," ought not to read "Corona probably photographed; it seemed fluorescent; eye-piece worked well." It is a case in which one science worked badly to serve another.

In Parliament, on August 8th, Mr. Anderson asked the Postmaster-General to consider the expediency of adopting a letter or syllable tariff instead of a word tariff, for postal telegrams. The Postmaster-General also announced that an International Telegraphic Congress would be held in London, next June. Mr. Whitwell proposed that the inequality of the rates between telegrams from the Continent to London and telegrams from the Continent to the provinces be removed. Lord John Manners replied that negotiations to that end were now pending between two or three foreign governments.—*Telegraphic Journal*.

FOUND AT LAST.—A rhyme has been found for telephone by an ingenious poet of Boston, thus:

The man who first contrived the telephone,
Him may all lovers as their caliph own.

The Louisville *Courier-Journal* gives a lengthy account of a Kentucky telephone which it asserts throws all others into the shade. It was invented by Mr. Watts, a well known lawyer in that city. The apparatus consists of a piece of light pine board with a circular aperture covered with thin sheepskin finely dressed, to the center of which one end of the wire is attached, held in place by a steel button. The whole is framed in a substantial box. Whispers may be heard, though the conversation takes place at a distance of half a mile.

It cannot be too often repeated at this season of the year, when thunder storms are so frequent, that one of the most dangerous places in which to seek shelter is under a large tree. Of all the persons and animals killed by lightning probably eight-tenths have been destroyed under or near trees. Oak trees more frequently than any others draw lightning from the clouds, partly, perhaps, because the close grain of the oak increases its conducting power, and partly because the sap of the oak contains a large quantity of iron in solution, which, by impregnating the wood and bark, has the same effect. But no tree in this country enjoys the exemption of the Indian banyan, which, at least as the Hindoos believe, is never touched by lightning.

An official superior school of telegraphy will commence in Paris, on November 4th. A preliminary examination for the admission of pupils will be held in several of the cities of France, and the final examination will take place in October 21st, in Paris. Besides the students of telegraphy in the Ecole Polytechnique, it will be open to postmasters and operators reckoning two years service, to licentiates in science, old pupils of the Ecole Polytechnique, and of the Ecole Normale, Ecole des Mines, Ecole des ponts et Chaussées, Ecoles Forestières, Ecole Centrale des Arts et Manufactures, and there will be a certain number of free students, French or foreign, authorised to attend. A preliminary course, of a year's duration, will be instituted to prepare postmasters and operators for their entrance examination

THE OPERA AT HOME.—A curious micro-telephonic experiment is reported from Switzerland. An Italian opera company having announced "Don Pasquale," one of the telegraph inspectors of the district fitted up in a first-row box near the stage, a Hughes carbon microphone, connected by two wires of 1 mm. diameter, to four telephone receivers placed in a billiard room near the theatre. In circuit with the microphone was a small battery of two cells. The result was completely successful. The telephones reproduced exactly the efforts both of the vocalists and of the orchestra, and several critical auditors, under these novel circumstances, testified that they did not lose a note or a tone. The same results were obtained on introducing into the circuit a resistance of ten kilometres without increasing the number of cells. The well-known lightness and grace of the music of the opera thus experimented upon show us what sensibility can be afforded by a combination of the instruments of Hughes and Bell.—*Electrician*.

DISADVANTAGES OF PNEUMATIC DISPATCHES.—This is the kind of a thing that results in Paris, says a cynical Frenchman, from a habit the telegraph administration there has of sending the original manuscripts of dispatches bodily by the pneumatic tube. A married lady has a lover who is a friend of the husband. This lady meets her Don Juan. "My dear," says he, "remain with me, and we will go and dine together at the restaurant." "But my husband expects me." "Tell him that you will not return till ten o'clock." "What pretext can I give?" "Send him a telegram, saying that you are dining with your friend Bertha; as she is in our confidence, we shall have nothing to fear." "It is a good idea." They go into a telegraph office. The lady, to save the trouble of taking off her gloves, begs her friend to write the message himself. The dispatch is sent, as it is, by the atmospheric tube. The husband reads: "Dearest, do not wait, I dine at Bertha's. Shall return at ten o'clock." And the unfortunate husband recognizes the writing of his best friend. The scene, adds the narrator, may be imagined, and I should rather think it might.—*London Court Circular*.

There is complaint, that memorials from British telegraphers to the Postmaster-General do not always reach that official. The *Dublin Freeman's Journal* of August 17, says: "A curious fact was elicited yesterday (August 16) by a question asked of the Postmaster-General by Mr. O'Byrne, for Mr. Gray. On the 23rd of last month a memorial to the Postmaster-General by the telegraph clerks in Dublin, complaining that they were not placed on an equality with their brethren in the great English towns, was handed to the authorities here. In ordinary course it should have reached the hands of Lord John Manners on the 24th. But it appears it has not reached him at all. The question is, has it been suppressed, and, if so, by whom? This is a very serious matter, and calls for explanation. If the chiefs of an office can suppress a memorial adopted by their officials to the head of the department, what protection have the latter? They cannot appeal to the Press under pain of dismissal, and, in fact, they are left helpless. We would like to know, too, why the clerks in Dublin should not be paid the same rate for the same work as in Manchester or Liverpool. It appears to us that the Department in Dublin wants an overhauling."

A Telegraphic Blackleg.

Operators and railroad men are warned to be on the look-out for, and avoid having anything to do with, one C. L. Spencer, who hails from Brooklyn, N. Y., but recently from Marshall, Texas, and styles himself an operator and first-class man in freight office. He will resort to any means of obtaining employment, managing, by a great deal of bootlicking, to win the confidence of some men in authority who admire that quality in their subordinates, and afterward, by misrepresentation and other disreputable processes, endeavors to undermine and injure the reputation of his fellow craftsmen, thinking thereby to promote his own interests. Lying is his forte, and stealing his profession. He recently absconded from this place with quite a sum of money belonging to his employer and benefactor—a man who was a friend to him in his distress, when he arrived here penniless and hungry. His hotel and wash bills he also left unpaid. He is about twenty-five years of age, weighs about 135 pounds, dark complexion, large, crooked and unbrushed teeth, short upper lip that never entirely covers his teeth, mouth somewhat drawn to the left, and usually shaves smooth.

OPERATORS AND CLERKS

& N. & G. S. and St. L. & S. E. R. R. Guthrie, Ky.

PERSONALS.

Harry Muoro, an "old timer," is at Hat Creek, Wyo., on the Cheyenne and Black Hills Line.

M. S. Greene, manager at Fort Laramie, Wyo., started east Sept. 2, to take his family out.

John M. Graham, last season at Shreveport, has been added to the force at Galveston, Texas.

Mr. L. S. Fox, of K. P. R. R., has been appointed manager Virginia Point, Texas, Western Union service.

Mr. Fred. Morean, of Washington, who is off on a six weeks' vacation, made us a pleasant call last week.

E. O'C McInerney, of the U. S. Signal Service, has been transferred from Mason to Galveston, Texas, his former post.

Mr. A. Y. Coomer, operator at Ashley, Ohio, is off on a month's vacation. His brother, W. A., of New London, has taken his place.

James Halley left Deadwood, D. T., Sept. 10th, for a two months' vacation. The object of his visit will return with him. Congratulations.

"Doc" Bacon is engaged in the drug business at Lead City, Dakota. He also looks after the interests of the C. and B. H. office at that point.

Harry Marsh, formerly of Baltimore W. U., is now with the U. S. Military Telegraph at Fort McKavitt, Texas, enjoying the freedom of border life.

Mr. James McCloskey, formerly at Collenade Hotel, Philadelphia, has enlisted in the U. S. Signal Service, and been detailed as assistant at Galveston, Texas.

Mr. James Johnson, late of Memphis, Tenn., has been appointed day man at "Gd." Galveston, Texas, with W. F. Higgs, formerly at Tremont House, as night man.

Mr. E. W. Emery, a well-known first-class man who has been running around considerably of late, has settled down as operator for the Cheyenne and Black Hills Telegraph Company at Deadwood.

Harry Pye, of the Western Union, Giddings, Texas, has accepted promotion in same service at Shreveport, La. His departure from Giddings is a subject of regret among business men and citizens there.

Mrs. Belle Wilbur, [operator] at Easthampton, Mass., met with a serious loss at 2:30 on the morning of September 4th, by the burning of her house. She herself barely escaped the flames, and lost her wardrobe valued at \$200, also bills of W. U. Telegraph Company just collected, amounting to \$40.

Harry Nichols, the noted tourist, turned up in Houston, Texas, about the 1st instant, and secured a railroad night situation. Harry says he wouldn't have walked to Texas, but they had quarantined the train. He wanted to come on parlor and sleeping cars attached. He declares that Zeublin cried when he left Philadelphia.

The following operators have been in the White Mountains this summer. L. H. Powers, at Profile House. A. L. Darling, at Bethlehem. Miss Emma Foss at Maplewood Hotel, Bethlehem. Miss M. A. Kenny, at Crawford House. C. A. Sanborn at Twin Mountain House. G. F. Cheney, at Fabyan House. F. E. Merrill at base Mount Washington. W. C. Eaton at Mount Washington, and F. O. Nourse at Glen House.

One of the New Haven operators got back from Europe last Sunday, having "done" the Exposition to his perfect satisfaction. The boys have since been plying him with so many questions that the poor fellow—probably during a temporary aberration of mind—was discovered writing the following on the back of a message blank:

And so you've returned from Europe,
Now tell us how much did you see?
Oh! I took in a lot of old castles,
And trotted about in Poree.

I saw all the things in the guide books,
Did the classical dodge when in Rome;
But between you and me and the bedpost,
I am thundering glad to get home.

NEW HAVEN, CONN.—In the Western Union force of our Elm City, there have been few changes. J. Murray Fairchild, manager, is well liked by all. W. H. Fairchild is still treasurer, Fred Fairchild, our gallant chief, is always in good spirits. Deck Hubbard is on the press wire (a hot string) Allen Penack works the N. Y. quad. He is subbing for Page, who has been doing the Paris Exposition, and

has just returned. L. H. Hart, our pet, works the Boston way. Mrs. Lizzie Smith works the shore wire and around with ease, and does pretty work. Old Pete Rousseau is our night owl, and dinner relief. William Hendricks our old stand-by, with Eddy Pramer works the trick at the depot. Messrs. Kelsey and Allwell manage steamboat dock. The A. & P. force is short somewhat since last year. Mat. Mollahan, manager, is liked by all who know him. Edmund Jacob Hoffman has relieved Jack Tierney on press first of month. Jack goes to N. Y. Weaver also left for Boston, so two men run the office at present. Mr. Grey, late manager, has quite an extensive telephone circuit, doing good business. Mr. Pepper, of Springfield called on us on his way up country.

ORION.

TRENTON, N. J.—Last Monday morning the inhabitants of this city had their curiosity aroused by an item in one of the daily papers to the effect that the Semaphoric Club of Trenton would make its first parade that evening. At 7:30 p. m. the street corners were crowded to overflowing with men, women, and children to witness the procession. A few moments before eight o'clock, the Semaphoric Club, composed chiefly of telegraph operators, left the W. U. telegraph office, corner of State and Warren Streets, little thinking of what a sensation they were creating, to attend a water melon party at Hamilton Square, about five miles from Trenton. They all wore high beaver hats and Dixie collars. As they turned the corner of Green and Perry Streets, they were greeted with cheers from the crowd. The members of the club were all provided with instruments, including bass and tenor drums, bass horns, trombones, tin file, bones, and everything capable of sounding a note. After spending a pleasant evening among the water melons, they started homeward, and when near the W. U. telegraph office at Millham, decided to give Squire Abbott a serenade. The Squire was effectively awakened by the music and singing of the Club. The serenaders were invited inside and hospitably treated, after which they retired singing a few of the latest songs.

OMAHA.—Willis A. Sharp, who has long been operator for the B. and M. R. R. at their general offices in this city, has been promoted to the position of manager of that company's offices at Plattsmouth, Neb. Mr. Sharp has worked faithfully in the discharge of his duties, and the promotion is a due recognition of his services. Mr. George Shaw, of Plattsmouth, fills the place made vacant by the departure of Mr. Sharp. Mr. George M. Myers, operator at General Offices, U. P. R. R., has been dangerously ill for two or three weeks with typhoid fever; his brother is here attending him. Messrs. Hargrave, Swivel, Reed, Morrison, and Foster, all operators at Council Bluffs, were over to see the sights last week, and the amount of soda water the average Bluffite can secrete is truly astonishing. A. A. Honey Esq., an "old timer," now station agent at Jackson, Neb., U. P. R. R., was in the city for a few days on a visit to Mr. J. J. Dickey. F. B. Williams was raised Sept. 1st to the dignity of chief operator Western Union "Om" office, vice Mr. Drake resigned. C. E. Mayne, H. R. H. signs himself first assistant chief, and Sam J. Ritchie second assistant. Messrs. Williams and Griffith are thinking of taking a visit into the southern portion of the State. Transportation has been promised them. Mr. J. G. Boyd has received the appointment of chief train dispatcher U. P. R. R. Eastern Division, with headquarters at Omaha.

BIRTHS.

August 25, to W. A. Culp, manager Western Union Telegraph Co., Henderson, Ky., a daughter.

MARRIAGES.

ROBERTSON—STEWART.—July 8, by and at the residence of the Rev. C. S. Snowden, Lake City, Fla., Mr. C. C. Robertson, of the Western Union Telegraph Office, Lake City, to Miss Sadie Stewart, formerly of Quincy, Fla.

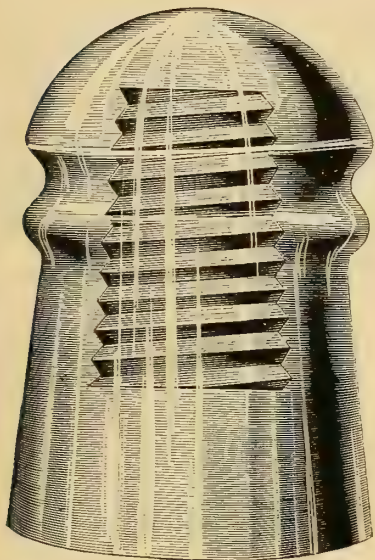
MILLBURN—POLLIMER.—August 28, at San Antonio, Texas, Thomas W. Millburn, U. S. Military Telegraph, to Miss Anna Pollmer, of San Antonio.

DEATHS.

MOSHER.—August 20, at Colton, Cal., of consumption, Katie Bayliss Mosher, wife of L. E. Mosher, agent Southern Pacific Railroad, aged 24 years, 8 months, and 10 days.

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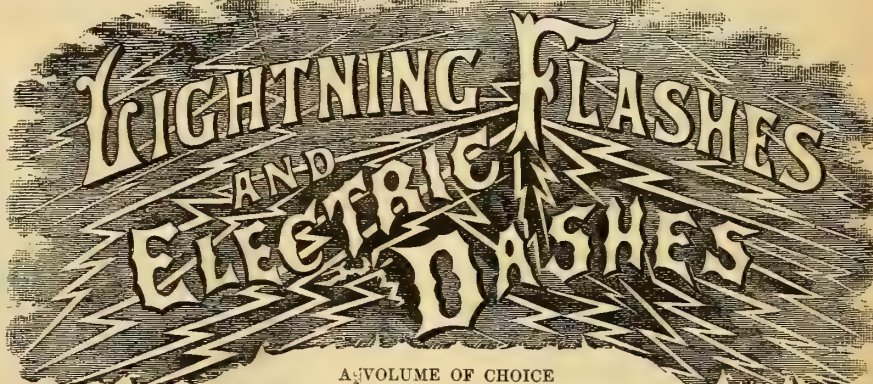
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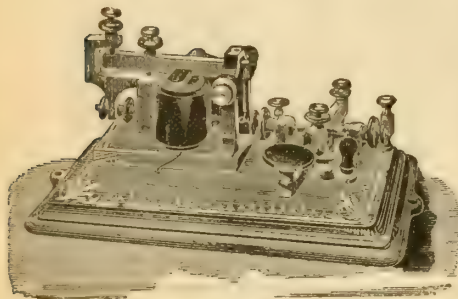
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Clubs for The Operator.

It is now time to commence getting up clubs for THE OPERATOR and procuring orders for our other publications. We look for a very large increase of subscribers, and a greatly increased sale of books, during the coming winter, and, as an experiment, have decided to offer much more liberal inducements to operators to work for us than ever before. If these liberal terms bring us a satisfactory return, they will be continued; if not, they will hardly be offered another year. On the 1st of November we intend issuing a large edition of THE OPERATOR, sending a specimen copy to those offices in which we have not now any subscribers. Agents should not fail to take advantage of this. Send in personals and other items, to reach us about October 15th, and order as many extra copies as you can judiciously use, which will be mailed free; then work hard, when the paper is out to get all the subscribers and all the orders for books you can. Read carefully the following liberal premiums for clubs:

Retail Price.
For 2 Yearly Subscribers, we will send One Pack of Visiting Cards with Electrotype of Sounder and Key and 2 Engravings of Prof. Morse. \$0.55
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" 5—THE OPERATOR one year or a copy of either "Lightning Flashes" or "Christmas Evergreens"..... 1.50
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" 40—A First-class Hunting-Case Silver Watch..... 15.00
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Where cash premiums are preferred, we will allow agents 25 cents commission on each yearly subscription they may obtain, and at the same rate for shorter periods. There is absolutely no difficulty in obtaining subscriptions for THE OPERATOR, and agents will find that at this liberal commission they cannot be better or more profitably engaged in their spare moments than in soliciting subscriptions for THE OPERATOR. Send postal card for specimen copies for getting up clubs, which will be mailed free.

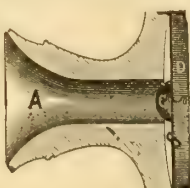
Renewals count as new subscriptions. Two half yearly or four three months' subscriptions count as one year. "Oakum Pickings" or "Sam Johnson" sold singly, count as one yearly subscription each, and "Lightning Flashes" or "Christmas Evergreens" as two each. When an agent sells books in connection with the paper at the reduced Club Rates given elsewhere, we will give him credit for as many yearly subscriptions toward any premium he may desire as we can afford. Agents can have other premiums besides those mentioned, if they prefer them; and when unable to obtain the full number of subscribers can make up the deficiency in cash, when the premium will be sent them. Send in orders as fast as received, which will be placed to your credit, and can be added to at any time. Agents should endeavor, as far as possible in each case, to obtain orders for one or more books in connection with the paper.

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SAM JOHNSON;

THE EXPERIENCE AND OBSERVATIONS

OF A

RAILROAD TELEGRAPH OPERATOR.

By J. ALBERT CLIPPINGER,

Author of "The Pedagogue of Widow's Gulch," the "Samson" Papers, etc.

177 octavo pp., Strong Paper Covers, 75 cts.

"SAM JOHNSON" is now ready, and can be ordered at once. It is printed on good paper, from clear type, substantially bound in strong paper covers, and sold at 75 cents a copy. A limited number have also been bound in full cloth, price \$1.35.

The object of this book is to portray the inside life of Railroaders and Railroad, that part which is peculiar to themselves as a class, and of which the public have no just conception. The author has not confined himself to a dry detail of facts and figures, but has endeavored to depict dangerous and excitable, as well as laughable, incidents of actual occurrence, in a humorous, instructive, interesting, and original manner. The book also contains much information that cannot be presented statistically. It is life history, and is intended to give the public "an insight into the inner life of Railroaders, a view of the daily and nightly workings of the busy bees who manipulate the two greatest agents of modern civilization—Electricity and Steam. It shows their virtues, their follies, and their humors; the dangers and privations they undergo, as well as the pleasures and happiness they experience."

"I have endeavored," says the author, "to cull from the inexhaustible fund of Sam Johnson's experience and observations those incidents of actual occurrence which, while illustrating some particular phase of railroad life, shall also excite laughter and good feeling. I have not spared the railroad at the expense of truth; neither have I bestowed upon him unmerited commendation. I have simply striven to hold him up before the public mirror, that the people may see him as he is seen by his fellows." The book is divided into four epochs:

In the first epoch the following sketches, among others, appear—Sam's First Appearance Telegraphically—The "Ager"—A Serious Practical Joke—A Narrow Escape from States Prison—Why do all Railroaders Swear? Why do all Conductors "Knock Down"?—Telegraphing Extraordinary.

The second epoch is spiced with: Mistaken for Another—in the "Lock-Up"—Confidence Operators—A Little Unpleasantness—Sam's Epitaph—Playing Checkers by Telegraph—A Warm Reception—Railroading Under Difficulties—Lightning Flashes—Worn Out.

In the third epoch: Newtown—T. P. & W. (Tired Poor, and Wretched) R.R.—A Colored Joke—Peculiarities of the Newtownians—The Sucker Musquito—A Fourth of July Breakfast Never to be Forgotten—Narrow Escape from a Watery Grave—Souless Corporations.

The fourth epoch embraces Sam Johnson's experience and observations in California, and is replete with exciting and laughable incidents, among which are: Poverty Flat—Sugarville, Poverty Flat, and Beet Land Railroad (this embraces a time card, and rules and regulations that are entirely new. No railroaders' education is complete without them).—Train Men in California—Railroaders Religiously—Jack Frank's Success Counting Railroad Ties (a joke that was too practical)—The Only One (a thrilling incident)—Stealing Time—Flagging the Moon—Telegraph Line Repaired—Should Railroaders Marry? (an important question, illustrated by the experiences of a number of railroaders)—Railroad Telegraph Operators.

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THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

October 1st, 1878.

Volume IX.

Whole No. 111.

Complaint of a Telegraph Pole.

While a tree in the forest how happy was I!
When among my companions beneath the blue sky,
Standing erect clothed in branches of green,
With the peasants rejoicing when my chestnuts were seen.

With the sweet chirping birds were my limbs always filled,
They were wont on my branches their houses to build;
And how dear was the hill that afforded me shade,
For beyond its bright summit the scorching sun stayed.

At the sound of the water that fell from the wheel
Of the neighboring mill how refreshed I would feel;
Still the whispering brook from the mill river shoots,
That was wont in its passage to bathe my poor roots.

How enjoying to look on the truants who skipped
On the banks of the stream, fished and frolicked and dipped;
But enough has been said of my prosperous days,
For now I'm exposed to the sun's burning rays.

They've deprived me of branches, of bark and the rest,
With sharp-cutting nails have damaged my breast;
And placed me in mockery here in the street,
With a pool of malarious filth at my feet.

In place of my chestnuts they've loaded me down
With a dozen long wires that stretch through the town;
And instead of a nest on a beautiful bough,
A small glass on a cross-stick is all I see now.

And whenever I strain to behold my old site,
And to look if the mountain and hills are bright,
I see mountains of granite, but nowhere a tree,
And nothing is left save sad memories for me.

JOHN J. LYNCH.

FORDHAM, N. Y.

The Superintendent that Helen Met.

I paid a visit last week to an institution whose very existence I had never previously even dreamt of. Probably few New York and less out-of-town readers of THE OPERATOR have ever heard of the place. It is called the Telegraphers' Retreat, and is a kind of home or asylum for aged and disabled members of the telegraphic fraternity. When my brother-in-law, Dr. Newell, husband of my sister Florence, first spoke of it, I thought he was jesting. "No," he said, "I'm in real earnest. It's a most beautiful place, too, and if you would like to see it, you and I will go up there any day that may be mutually convenient, and go through it. I am acquainted with one of the physicians."

"Where is it?" I inquired, carelessly; for in truth I was still incredulous.

"It is situated," he replied, "upon the banks of the pretty little Dunedin river. The place itself is called Blythswood Holm. It is a very retired spot, with no houses in the vicinity, and has few visitors except such as go on business to the Retreat."

"What kind of a building is it?" I was now becoming interested.

"Brick, four stories, and built upon the most delightful site I think I have ever seen. It is near the top of a gently sloping hill; on both sides a beautiful valley stretches along, and during the summer there is always a delicious breeze stirring."

"Monday would suit me very nicely," was my unconditional surrender. The fact is, by this time I was dying, as we girls say, to see this Utopian place. I had often wondered what became of the "old men" telegraphically speaking—the "old timers" in the business—and now that I knew, I wanted to see and talk with some of them. Monday finally came, and the doctor and I started. Arriving at the Retreat, I was introduced to Dr. Thatcher, who kindly took us around.

"This first patient," remarked Dr. Thatcher, as we approached a tall, broad-shouldered man of perhaps fifty, with a dreamy, far away look in his eyes, "was a superintendent before he came here.

His mind becoming affected on account of the soul stirring applications for employment he received from college graduates and the like, he was placed here to see if there was any hope of his ultimate recovery. But there does not seem to be. I fear he will never entirely recover. He is quite harmless, however. He imagines that all his visitors are operators looking for situations. Come over and speak to him. He has a number of original applications, which are curiosities in their way, though he does not often show them to visitors."

"Good morning, Superintendent," suggested Dr. Newell, bowing.

"We have no vacancies just at present," replied the superintendent, with much dignity.

"We do not want a situation," remarked my brother-in-law, "We merely called to pay you a visit."

"Oh! yes," returned the superintendent, with a faint smile, "I haven't the slightest doubt in the world but that you are a strictly first-class man—you all are when you want a job. Well, I have an office that I might be able to give you as a particular favor. It requires an A 1 operator; the hours are from seven A. M. until nine P. M., and the salary \$35 a month. Where are your references?"

"I beg your pardon, Superintendent, but you don't seem to understand—" I began, with as sweet a smile as I could muster.

"And who are you, pray?" he interrupted, sternly. "I am a telegrapher, and occasionally correspond a little for THE OPERATOR."

"Aha!" he ejaculated dramatically, "I thought I would get one of you people here some time. So you're one of those depraved persons who write for the press, eh?—one of those 'literary' individuals who, if they want to convey the intelligence that Jim Hooper has succeeded Jerry Conway at Red Oak Station, and that Sam Miner has taken Hooper's place, would spin it out to read: The genial and gentlemanly Mr. James Franklin Hooper, 'Hr.' better known among his acquaintances as Old Man Hoop, has been promoted to fill the vacancy caused by the resignation of Mr. Jerry Conway, 'Cy,' at Red Oak Station, 'Ro.' Mr. Hooper is one of the best operators in the country, and the handsomest man in the State. All the girls for miles around have spent the best years of their lives in endeavoring to captivate him. The active and energetic Mr. Samuel F. B. Miner, 'Mi,' familiarly called Sammy, has been appointed to the position made vacant by the promotion of Mr. Hooper. Mr. Miner is the finest operator in the country, and the handsomest man in the State. All the girls for miles around have spent the best years of their lives in endeavoring to captivate him. We all regret the departure from our midst of so efficient and accomplished a gentleman as Mr. Conway, and unite in wishing him unbounded success in his new field of labor. Mr. Conway is the best operator in the country, and the hand—" bah! I'm sick of such notices. No, madam, the company does not require your services," and he scowled darkly, bowed stiffly, and marched off.

"This young lady wishes to see some of those original applications you have," remarked Dr. Thatcher, persuasively, after a pause, "of course you'll accommodate her. I know you will."

He looked from one to the other suspiciously for several moments, and then handed out half a dozen sheets of paper scrawled over with what was probably intended for writing. Three of these I succeeded in copying before I left, and herewith present to the readers of THE OPERATOR, with the remark that it was no wonder the poor man lost his judgment.

Sir I as A Telegrapher seat myself Down to Write you a few lines To see what you can do for me. To Wards Giving me A Job I will take A night of any Place you will give Me one I learned My Trade under — I can get a good recommend from Him if you will Give me A Job I will Work Cheap. Will you Please answer

DEAR SIR I had been practicing Telegraphing last winter and all spring and am good with a register. I can print fast and plain and can read abt one half by sound. I will make application for an Ois. I will do my duty and will work cheap until I am a sound Operator. Be understood I can read of the register very well. Give me a paper Office a few months and any wages you have a mind to just so that I can make out of myself a sound op. Please don't forget me and help me up. give a trial and if I don't suit you send me home again. (Please not forget me.) if you want me quick send by Telegram.

[write to me about it, p. case.]
yours,

73 to all.

Sir I take my Penn to drop you those few Lines I would lik very much to come West and if you would

be willing to Imploy me as operator in one of your offices I should feel under great ob

I am tending telegraph school heer at oberlin I have bin heer about ten weekes we learn bey sound I should feel obliged to you if sow felt to employ me onn your rail road I understand written Perfecttill well with the instrumnts and allow well aquinted with the figers and Letters I can work on a paper insterment allow and I Prefer a Papper to sound and if you put confesness a nufe to employ me I should try and do my doety faithful to all Parties all though I would feel it my duty to under instruction fore a week or tow to get the ways of the office and rode I have to make my one livelihood in this world I will close by hopen a spenday replie and Pless tell wags and you Pay fore good operator and all your termens.

I will close

I have more to tell you about what I saw there, but guess that will do for this time. HELEN.

Railroad Telegraph Operators.

There is a line of demarkation between the railroad operator and the news and commercial operator—a boundary beyond which the one does not venture, and over which the other does not step. Generally the railroad operator does not aspire to that perfection in the profession which his commercial brother attains. The amount of telegraphic business that he transacts does not give him practice sufficient to enable him to mount to the top-most round in the ladder of telegraphy. A railroad operator, particularly a station agent, is a man of varied pursuits, and of great responsibilities. People who travel by railroad, pass stations, and see the operator sitting at his desk, or selling tickets, handling baggage or freight, or running out to the train with letters and bills, may think that he is a pretty busy man, at least for the time being. That is about all the consideration they will give the subject. Now, if the people on the train were aware that that operator had received, half an hour before, an order to hold the train in which they sat at his station until a train from an opposite direction should arrive, they might take more interest in him. Amid the rush and hurry of passengers, the selling of tickets, checking of baggage, being pulled here and called there, he must ever have uppermost in his mind the train order received half an hour before. If he fails to deliver it, the train leaves, and a collision is the result. Not only in regard to these things are his responsibilities great, but he must be perfect in copying orders and messages. The altering or dropping of a single word may bring trains together, or cause serious delays and losses. He must never fail to deliver to a train even what seems to be the most unimportant message, though received hours before the train was expected. The railroad operator has the lives, comfort, and convenience of the traveling public daily and hourly in his hands, and to his credit and honor be it said, he rarely betrays the trust. By negligence he can delay one train, which will delay many others, and thus discommode and disappoint many. The prompt, efficient operator is one of the most important employes in the service of a railroad company. Does he get that commendation from the company and the public that his services and merits entitle him to? I can illustrate this phase of the subject best by giving an instance of actual occurrence:

When the "Fast Train," which made the trip from New York to San Francisco in eighty-four hours, was on the way, operators were strictly commanded to be in their offices at a certain hour, long before the train was expected. This train was expected at Sacramento at any hour between five o'clock P. M. and the morning following. Operators west of Sacramento had to be within reach of their keys from this hour until the train did pass. From the time the "Fast Train" left Ogden until it arrived at San Francisco, all offices received reports of its departure from every other telegraph office. They were thus as well posted in regard to its movements as were the superintendents, and could calculate pretty nearly the time when it would reach them. At midnight it was still beyond Truckee, east of the Sierra Nevada Mountains. At this hour the operator at Gouge Eye stepped out for a few minutes to get a lunch, leaving several railroad men in his office. While he was absent, some one began repeating his call very "plughishly." The train dispatcher tried to make him desist, but could not "break" him. Ground wires were put on, and the trouble located between the stations next east and west of Gouge Eye, therefore it must have been the operator of Gouge Eye himself, or some one in his office, who was causing the trouble. It ceased. Then the dispatcher called Gouge Eye. He an-

swered. He was asked where the trouble had been, and why he did not allow himself to be "broken?" He replied that he knew of no trouble; that he had been out of the office a few minutes; that the line was all right when he left, and also when he returned. He explained that he had left several railroad men in the office when he went out, but every one of them assured him that no one had touched the key. The explanation was not satisfactory. The "Fast Train" was expected every minute, though it was known to be two hundred miles away. The operator was ordered to send in his resignation by the first train.

This incident shows how close the watch kept over operators. It also illustrates the risks they run, and the consideration they receive when thought neglectful. Now we will see who got the praise from the public press. The general managers of the road received the first encomiums, next the division superintendents. They were mentioned by name, and applauded for their vigilance and watchfulness. Then the engineers and conductors were named and praised, and even the firemen. These parties justly merited the commendation they received; but was not the operator equally deserving of public notice? Was there an operator on the train's route between New York and San Francisco who saw his name in print on account of his watchfulness?

I am not enumerating the multiplied duties and responsibilities of railroad operators for the purpose of complaining of their situation, but simply in hopes that they may be better understood and appreciated. It must be borne in mind that they have no Sabbaths, no holidays, and cannot even make an appointment for a few hours' absence with any certainty of keeping it. Here is an instance:

A few days previous to last Thanksgiving Day, I was invited by a family living about a mile from the depot to make one of a small company who were to assemble there on the day of national thanksgiving to celebrate the day, and also to pay their respects to a roast turkey, and other delicacies. I was allowed to set whatever time for the repast would be most convenient for me. I did, and made it three o'clock P. M. Now, turkey dinners do not occur so often in Poverty Flat that one is liable to turn gobbler on account of eating thereof, therefore I earnestly hoped that I might be permitted to do justice to this one. I retired the evening before, having made up my mind to partake of but a light breakfast and nothing more until I should make my bow at the Thanksgiving Day dinner, in order that my appetite might be sharp, as became the occasion. When I reached the office Thanksgiving Day morning, after having eaten a very scanty breakfast, the first salutation that greeted me was a call from the dispatcher's office, followed by the soothing (?) information that train No. 8 was in the ditch a few miles west of Poverty Flat, and that I must pay close attention to the instrument for I might be wanted at any moment. In my anguish I cried aloud: "Good bye, turkey! thou art so near, and yet so far. I love thee, but can't embrace thee."

Well, I didn't attend the Thanksgiving Day-turkey-dinner-party. I am not particularly fond of turkey, except when I can't get it. Then I do want it. But to be compelled to remain at work, and suck the bone of disappointment, realizing all the while what splendid enjoyment others are having, and all because an accident must happen on that particular day—just as if it had been set apart for such things—is crowding the agony on a little too heavily. But, as if this were not enough, when I took up the daily paper the morning after this event, what should I see but these startling words: "Grand Turkey Roast, and General Good Time among the Prisoners at the County Jail."

The paper dropped from my hands. I jumped up, vowing that I would immediately go and steal a horse, and thereby get into jail, and probably I might get some of the remnants from this year's feast; if not in time for this I would be on hand for the next. But I didn't do it. A call from the instrument demanded my attention, and when I was at liberty again my excitement had subsided, and I repented of my rash determination. I again took up the paper—"Great Caesar! what is this?" I exclaimed. "Great jollification of the prisoners at San Quentin. Grand feast for fourteen hundred convicts!"

This was too much. I was immediately seized with a desire to murder some one. The more I thought of it, the more blood-thirsty I became. I, an honest, upright citizen, working and toiling for my daily bread, am less favored by fortune than the chief of sinners. What consolation does a man

have for doing right when the wrong doers derive all the profit, and all the pleasure—and all the turkey? Brooding over these things wrought my nerves up to the highest destructive pitch, and what might have happened will never be known, for again the sander that has led me a dance for fifteen years, caused me to forget all else, and obey its voice.

And thus the fickle goddess of fortune ever deals with railroaders. Yet they are the liveliest of the lively, the happiest of the happy. There is a charm about operating, about railroading, the constant shifting, varying scenes, the rush and crush, the moving trains, the shrill whistle of the locomotive, and the general good feeling of one employed for another, be he stranger or familiar friend, that draws one to it as if by magic, and charms him by its ever moving panorama.—J. A. Clippinger in "Sun-Johnson."

The Los Angeles Manager and the Matches.

Twice a month THE OPERATOR comes to us, fresh after its journey of three thousand miles, and as fragrant with the perfume of the press upon its pages as though it had just been issued from the room where it is printed, in distant Gotham. We always peruse it eagerly, read the editorials in which subjects pertaining to the welfare of our craft are ably discussed, glance over the personals in hopes of finding the name of some friend of the olden time, who "though lost to sight," is still "to memory dear," and sometimes smile and sometimes hold our sides as laughter actually becomes a pain, over some comical witticism or well-told joke.

Wit and humor have, of course, been a part of human nature since the beginning, but it is only of late years that men have begun to make a business of saying comic things. Every newspaper has its column of "wit and humor," and many of them have their professional "funny man," who, considering the fact that he makes a business of writing something to be laughed at, is generally wonderfully successful. What a strain it must be upon the brain to call upon it daily, regardless of condition, for a contribution of nonsense that shall shake the sides of the waiting world out yonder, and make it forget for the moment the monotonous cares and pains of daily life. And then a real good laugh-provoker, one of those sharp-pointed sayings or stories which hurt nobody and take root deep in the mind, is not "like the snow-flake on the river, a moment bright then gone forever," but is always being resurrected again, clothed in new beauty. How it pops up in the mind when least expected, casting a glow of light and laughter over all the present and the future! How it takes us by surprise and springs into being apparently without the slightest provocation, changes an atmosphere of darkness into a flood of light, and in place of doubt and fear, leaves faith and hope! The world owes much to its humorists, and if they are compelled by driving circumstances to force a joke prematurely from their creative brain, so that it falls ignominiously in its mission, we will forgive them for the sake of the numberless good things which their bright fancy has produced. I have sometimes thought that outside of an actual funeral and its attendant gloominess, there is no such solemn sight in the world as the visage of an end-man at the minstrels during his moments of inaction; but perhaps if we could see the face of the professional humorist while he is engaged in the manufacture of some of his most amusing facts, we might behold its counterpart.

Nobody appreciates wit and humor more than a telegraph operator, whether it be a ridiculous bull, a practical joke, or a neat pun—for, as a class, we indulge in all of them, you know—and when he comes across something of the kind in THE OPERATOR or elsewhere, it is carefully filed away in his mind, to be flashed perhaps over a thousand miles to a fellow craftsman in a distant city, in a moment when the wire, relieved of its burden of business, becomes the medium for fraternal greetings.

In every main office there is some one who is generally credited with the paternity of the latest practical joke; then there is another who will try to make a pun upon the slightest possible provocation, and who spends some of his thoughtful moments in the manufacture of conundrums, good, bad, and indifferent. Then again there is the poet and the local artist who contribute liberally to the general fund for the promotion of good feeling.

We have the above characters here in Frisco. The poet is especially numerous. Probably he is encouraged to exist by the prophecy of Mr. Joaquin Miller, that the poet of the future would come from

the Sierras, from this new world "still smelling of paint." (Joaquin will forgive me if I don't quote him correctly.) The artist occasionally dashes off a sketch or a profile with so much of nature in it that we are induced to believe that some day, when he sits down to work in earnest, he will produce something which shall be a credit to himself and the fraternity.

Somebody has remarked, in substance, that to be fully cognizant of affairs at home you must go off to some distant place and come at it by roundabout methods. This idea presented itself forcibly to our minds the other day when THE OPERATOR came to hand with one or two startling disclosures which appeared to us in an aspect of perfect newness, although relating directly to this office and another a few hundred miles south. It no doubt startled some of your Eastern readers to hear that we are governed by rules here which, if enforced, would bring every operator to a state of such impecuniosity as even his previous circumstances failed to approach. But lest you might think us objects of charity, and kindly commence to organize relief committees for our benefit, allow me to say that the five has not in a single instance (as far as the writer knows) been imposed when, as is frequently the case, we neglect to cross off message numbers on the sheet. Perhaps our worthy manager found that, practically, it was a very poor rule, for he has been known upon more than one occasion to put himself in a position subject to its penalty.

When we further heard through your correspondent, "Nil Desperandum," of the diabolical conduct of the manager at Los Angeles, our excitement was fearful to contemplate. Our righteous indignation was not loud, but deep—very deep. Those of us who had met the Los Angeles manager at some previous time, were under the impression that he was a gentleman and an operator like ourselves, but after the discovery of his baseness, why of course such an opinion must be erroneous. A man who would knowingly and in cold blood lock up a box of unoffending matches in a burglar-proof safe, as "Nil Des," etc., alleges, must be a villain of the deepest dye! It was not on account of his tyrannical treatment of the matches that we were so seriously offended, but because of the wanton insult offered to every citizen who breathes the air of "this glorious climate of California." Everybody knows that in this Utopian State nobody has ever been known to take anything belonging to anybody else. You in the East especially know that when we retire at night here we lay all our household valuables out on the doorstep, so that they can be invigorated by the dew of heaven, and when we awake in the morning we find them untouched and undiminished! Now, in a country like this why should any one insult his fellow citizens by placing anything under lock and key, especially under that dreadful enemy of fraternity and equality, a combination lock? No wonder that each one of us individually accepted this action as a personal insult, and exclaimed: "Whither are we drifting? Why, this fiend in human form will eventually be locking up some of the current coin of the realm, and 'what will the burglars do then, poor things?'" An indignation meeting was held, some scathing resolutions adopted, and a committee appointed to devise some means by which the honor of our profession might be sustained, and justice meted out to the offender. We finally concluded that the safest and most satisfactory means of executing him would be through the medium of the "Volcanograph," that deadly long-range instrument invented by Prof. Werner, the author of "Leather Medals," "Pinguania," "What I Learned of California while in Wyoming," etc. The day of the execution has not yet been fixed, but you will doubtless hear of it if the explosion of the machine works satisfactorily. While the excitement was at its height our artist sat down in a quiet corner and pictured the scene upon the back of a No. 2 blank. The first act as he represented it was supposed to have taken place at twilight. It represents the said manager in a state of the wildest excitement, the perspiration streaming from every pore, and his eagle eye searching every imaginable hiding spot, for the Lucifer that is to light the gas and enable him to copy the report that seems to be fast accumulating at the other end of the wire. Over the whole scene hangs a peculiarly bluish atmosphere, produced by expressively flavored with brimstone which the metropolitan knight of the key some four hundred miles away is indulging in, because of the (to him) unaccountable delay in raising the other office. Scene second represents said manager at a later period in the same place. A happy thought has struck him, and with an eye to future contingencies he is seen in the very

act of locking up some mysterious object in the inner recesses of a safe with a complicated lock; while at a rear window one catches a glimpse of a nose flattened up against a pane of glass, a shaved head and a terrified countenance easily recognized as that of "Nil Desperandum," who has been a witness of the entire disgraceful performance, and whose stern resolve to expose the whole atrocious transaction is plainly visible in his features.

After gazing upon the above wonderful picture, our local poet was so impressed that he straightway retired and commenced a poem of nineteen stanzas, entitled "The Tramp's Lament." It is such an original production, especially as regards the meter, that I cannot refrain from giving you the first stanza as a specimen brick. Thusly:

"Tell me, ye frisky zephyrs that round the sand-hills
Is there not some pleasant spot, [play,
Some island down the Bay,
Where, free from locks and patent latches,
A cove can help himself to matches?"

I will add that the poem was never completed, the gifted author had a sudden rush of brains to the head, from which he has not yet recovered.

SAN FRANCISCO, August 31st.

DAMON.

An Electric Machine That Will Transmit Power By Wire.

To utilize the vast power generated by numberless rivers and tide-ways, by transmitting it from regions where not used to points where it is invaluable, has long puzzled scientists. In places away from the seaboard and the great water courses, especially, power has heretofore been obtained only by the erection of expensive machinery, the constant generation of steam, and the consequent consumption of vast quantities of coal brought from a distance.

While visiting the mining regions of the Sierra Nevada and Rocky Mountains in his late Western tour, Prof. Edison was struck with the difficulty there had by miners in drilling and boring, though in many cases in the vicinity of rapid flowing mountain streams. Except in "placer" mining, where the ore is washed out of the bed or banks of a river, or where expensive steam drills are used, the work of mining is laborious. While watching miners drilling by hand, a means of facilitating this work evolved itself from Edison's fertile brain. Turning to his intimate friend, Prof. Barker, of the University of Pennsylvania, he exclaimed, abstractedly, "Why cannot the power of yonder river (pointing to the Platte River on the plain a thousand feet below) be transmitted to these men by electricity?" This thought seemed not to go from Edison's head, and all the way across the plains on their journey home he and his friend "Barky," discussed various problems for the transmission of power.

Before starting for the West, Professor Barker had visited Ansonia, Conn., where his old friend, Mr. William Wallace, is engaged in the manufacture of electrical machines. Mr. Wallace has profound scientific research, and beside the mechanical part of his business, he devotes himself enthusiastically to that part of physics that comprehends electricity, magnetism, and the polarization of light. He showed Professor Barker an instrument to which he had devoted the best years of his life, but which was yet in a crude condition. He is still experimenting with it, but he believed he would so perfect it as to transmit power from one point to another by means of electricity.

When the Edison party had arrived in New York, Prof. Barker bethought himself of the instrument previously shown him by his friend, and which at the time he had only cursorily examined. He invited Prof. Edison to visit Ansonia with him, an invitation that was at once accepted. Last Sunday was the day fixed upon. The party consisted of Profs. Edison and Barker, Prof. Chandler of the Board of Health, and Mr. Edison's assistant, Mr. Bacheller.

It was an agreeable surprise to the party to find that Mr. Wallace had perfected his machine. Being exceedingly modest, and caring not for notoriety, he had shown the instrument to few, and these only persons whose lack of scientific knowledge prevented them from comprehending its usefulness. Mr. Wallace calls it a telemachon, and he smiled with pride as he pointed to a number of these machines, each one an improvement upon its predecessor, and each having required years to design, and nearly \$1,000 to construct.

Mr. Edison was enraptured. He fairly gloated over it. Then power was applied to the telemachon, and eight electric lights were kept ablaze at one time, each being equal to 4,000 candles, the subdivision of electric lights being a thing un-

known to science. This filled up Mr. Edison's cup of joy. He ran from the instrument to the lights, and from the lights back to the instrument. He sprawled over a table with the simplicity of a child, and made all kinds of calculations. He calculated the power of the instrument, and of the lights, the probable loss of power in transmission, the amount of coal the instrument would save in a day, a week, a month, a year, and the result of such saving on manufacturing.

That a man like Mr. Wallace, after studying privately upon the subject for years, should calmly, deliberately, and without ostentation, bring out before them an instrument calculated to revolutionize the entire manufacturing business, filled the party with amazement.

By means of it power may be obtained from places where river power or tidal power is abundant, or may be generated where fuel is cheap, as at the coal mines, and by means of an ordinary cable be transmitted hundreds of miles. The cable may be tapped at any point and power used therefrom.

Some notion of the stupendous results that may follow should the telemachon prove completely successful, is given in the opinion of Prof. C. W. Siemens of the Royal Society of Great Britain, who has recently visited this country. In a recent address in Glasgow he said that in England a means of transmitting power by electricity must soon be the important problem of the day. What are the English people to do when their coal is exhausted? Of America and her great water courses he said:

"The amount of water falling over Niagara is equal to 100,000,000 tons an hour falling 150 feet. The amount of coal required annually to raise such a weight up to the point from which it fell, which is a measure of the amount of power yielded by that water in falling, would require the consumption of 260,000,000 tons of coal a year, which is the amount now consumed by the entire world. Now, if 50 per cent. of the power used to drive the first dynamo-electric machine may be recovered from the second; and hence, if the whole power of Niagara could be utilized it could be distributed over the United States, so as to give from that waterfall alone a power equal to the present entire mechanical force of the world, estimating that one-half the coal used is solely for mechanical purposes."

As an example how the fall of such a body as the falls of Niagara could be practically utilized by means of the telemachon, a gentleman who has studied the subject for years gave the following illustration last Sunday: A series of flumes could be constructed from the edge of the descent of the American falls to the level of the water below of a size sufficient to carry all the water of the Niagara River through water wheels. With shafting this power would be used to turn the machine generating the electric current. This current could then be carried to New York city by conductors, which are copper rods. These rods may be tapped then at any point, wherever power is needed, and wires carried into factories just as gas is now carried in pipes through the streets. In the factory a telemachon would be placed of a power sufficiently great to run the shafting. Thus the entire power required by the State of New York might be taken off along the line of the main conductors. The amount of electricity taken off at any one point would be readily regulated in the same way in which the current taken from a battery for telegraphic purposes is now regulated—that is, by introducing suitable resistance in the local line.

So powerful are the magnets attached to this instrument, that the party, while observing it, were compelled to leave their watches in another room, else they would have been magnetized.

Mr. Edison believes that he can so assist Mr. Wallace in perfecting the telemachon that power may be transmitted from one point to another as though it were a telegraphic message. Already by means of this instrument Mr. Wallace is enabled to transmit the power of the Naugatuck River a quarter of a mile. The power of this stream is great enough to drive the ponderous machinery of the Wallace factory, where 300 men are employed. A series of experiments with the instrument has shown that in the transmission of this enormous power by electricity only 20 per cent. is lost.

In this instrument the electricity is produced by the Wallace dynamo-electric machine, no battery being used. Four large electro-magnets are placed with their poles facing each other. On an axis parallel with and situated between them is a disc of iron carrying upon its opposite faces a row of electro-magnets, thirty in number, on each face, whose poles, facing outward, revolve as close as possible to the poles of the large magnets, called the

field of force. On the same axis, but outside of these discs, strips of copper are placed equal in number to the magnets on the discs, each strip of copper being connected to one end of the wire on the magnet. The other end of the wire goes to the next strip. Each strip, therefore, is connected to the last end of the coils and to the first end of that immediately following it. When the disc, with its magnets, is revolved by any power, the weak magnetism remaining in the iron itself generates a current of electricity in the wire surrounding these magnets. In virtue of the principle discovered by Faraday, that whenever a conducting wire is moved in the vicinity of a magnet a current of electricity is caused to circulate in that wire, the feeble current thus generated flows around the magnets of the field of force, increasing their magnetism. This increased magnetism reacts upon the revolving magnets, increases the electric current, and so, alternately, until the magnetism attains a maximum, and that maximum is generated in the wires of the revolving magnets. This current bears for each a perfectly definite ratio to the power consumed, and they are capable of converting eighty per cent. of the power applied into electricity. The electric current generated is carried by two copper wires to a second machine, the telemachon. This effects the reverse operation, that is to say, the re-conversion of the electricity into mechanical power. The telemachon consists of a field of force and a revolving armature. This field of force consists of twelve large electro-magnets in two sets of six each, the poles of each set facing each other, and connected together by heavy bands or bridges. In the space enclosed by these magnets, and parallel with them, is the armature axis supporting an armature consisting of a ring of iron wire serving as a core, around which is wound an insulated copper wire in two series of 50 coils. The ends of these wires come out alternately to the right and left of the armature, and are connected with two break pieces upon their axes. Six springs or brushes of copper wire press upon these break pieces, each pair of brushes facing each other, and opposite a pair of magnets in the field of force. The electric current entering the machine presses round the field of force and magnetizes the magnets. At the same time it passes through the armature, magnetizing that, so that the poles of the armature nearest to the poles of the field magnets are of the opposite name. In consequence of this, the field of force magnets attract the poles of the armature and cause the armature to move. But the motion in its new position brings other portions of the break pieces in contact with the spring, and causes a redistribution of the magnetism. Again attraction takes place as before, and again the direction of the current is changed by the break pieces. The magnetic effect being continuous, the rotation is continuous, increasing constantly in speed until the friction and the magnetic power balance each other. In Sunday's experiment the odometer showed that the machine made 3,000 revolutions a minute.

The electricity from the wonderful telemachon may be applied to illumination. It solves the problem of the sub-division of electric lights. Both the Wallace foundry and the Farel foundry, near by, are lighted by these lights, the army of men being formed in two divisions, one working during the day, and the other up to midnight. Thickly studded as these foundries are with heavy machinery, and obstructed as the light must necessarily be by the ponderous cranes, drills, supporting columns, and projections, a clear light is thrown upon the machinery, perfectly illuminating it. Adjustments to the thirty-second of an inch may be made without the least strain upon the eyes. A beautiful effect of this light is its polarization—that mottled appearance which it assumes when falling through glass. This is the only artificial light, it is said, that is capable of producing it.

The following is an estimate, made by an expert, of what it would cost to light the streets of New York with these lights: The average street burner gives a light equal to ten candles. Assuming that one of the eight electric lights produced by the power of one machine is equal to 4,000 candles, and assuming that there are 5,000 lamps, each lamp burning 20 cubic feet of gas an hour, at a cost of \$1 a thousand feet, it would require 12½ of these machines to furnish all the light required. The cost of the gas by this rough estimate would be \$100 an hour. To produce the same light by electricity would require, say, thirteen machines, placed upon towers. The cost of a single light equal to that of 1,000 candles would be three cents an hour. Each machine giving 4,000 candle-lights would cost, therefore, twelve cents an hour, and thirteen would cost \$1.56 an hour.—N. Y. Sun.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

October 1st, 1878.

Readers of THE OPERATOR should bear in mind that we are always happy to purchase for them anything that they may desire from New York, whether in the line of telegraphic or electrical goods or otherwise. Any telegraphic instrument or apparatus advertised in these columns, or manufactured in this country, will be forwarded on receipt of very lowest manufacturers' prices. Books, newspapers or magazines on any subject will be sent prepaid by mail on receipt of publisher's prices. We will thank readers if in future they will send all their orders, small or great, to us. We will guarantee them satisfaction.

The American District Telegraph system is to be introduced in France.

We have received the photograph of Superintendent Sellers' monument, promised in the Reading letter, published last issue. Thanks.

A CORRESPONDENT asks the price of Minion's System of Phonography. Two dollars, prepaid by mail. It can be ordered through this office.

HELEN tells us in this issue of her visit to the Telegraphers' Retreat, and of a superintendent she met there. She promises several such articles during the winter.

WESTERN UNION stock on Saturday rose from 95½ to 97½, and reacted to 96½. If we are to judge by the price of the stock—and we generally can—the Company must be doing a satisfactory business.

AN interesting article on railroad telegraph operators, from Mr. Clippinger's new book, "Sam Johnson," will be found in this issue. It strikes the nail pretty squarely on the head, and will, no doubt, be eagerly read.

We would draw attention to our reconstructed, double-column advertisement on eleventh page of this issue. Particulars of all our publications will there be found in regular order, with extremely low club rates. Do not fail to read it. We also give on second page the unusually liberal premiums that we will this winter allow for clubs. Our terms this year are such that agents will be well repaid for the time devoted to canvassing.

Those interested in the phonograph will be glad to know that hereafter the instrument is to be sold outright, without any royalty to the Phonograph Company, or any further expense except the purchase money. The price is to be \$100 and \$200, according to finish, both instruments being alike, save in the latter respect. Purchasers can exhibit them wherever they choose, or make any use of them they see fit. The new machines a number of which have just been finished, are said to be a vast improvement over any others hitherto made. Any of our readers desiring a phonograph can order it, as they can any telegraphic or electrical instrument, through this office, at lowest price.

Further Ravages of Yell w Fever Among Southern Telegraphers.

At one time it was believed that the crisis of the yellow fever had been reached, and that the worst was over; but within a few days the disease seems to be spreading. In New Orleans, on Friday, the number of new cases reported was 416, an increase of 137 over the previous day, and the number of deaths 51, against 44 on the day before.

The fever has been unusually malignant in its attacks upon telegraph operators, as well as upon journalists and printers, their nervous systems not usually being strong enough to successfully withstand its ravages. Were it not for the large number of operators who nobly volunteer to take the places of those struck down, many of the Southern cities and towns would be entirely without telegraphic communication. Even as it is, serious disarrangements often take place. A telegram from Greenville, Miss., dated September 20th, says that that office was then entirely cut off from the outside world, as the Vicksburg office could not take their business, there being, the telegram said, but one operator at Vicksburg. Greenville was then out of business, and had not been able to get a message through for nine days. They could have had relief but for this.

Another dispatch dated New Orleans same day says that the telegraph offices at Greenville and Vicksburg had been down for some days, and that messengers had to be sent by road as far as the latter point. This is more probable, as it is not likely that, were the wire all right, Greenville would be unable to get off business for nine days, even if the Vicksburg staff was reduced to a single operator.

A later telegram, dated Vicksburg, September 28th, says that the telegraph operator at Greenville is sick, and that an operator to take his place will reach Greenville Monday. The sick operator must be J. W. Hunsacker, spoken of last issue, as Hunsacker, who was previously reported as having gone to Greenville after leaving Grenada.

The following telegraphers have died since last issue:

Operator E. W. Gibson, died at Memphis, September 17.

Operator J. H. Allen, of Chillicothe, O., died at same place, September 22.

Acting Chief John W. McDonald, died in same city, September 27.

Woodland E. Barnes, aged fourteen years, son of Manager E. W. Barnes, died at New Orleans September 25. Robert and Jefferson, two more sons, died on the 28th, making the father, three sons, and two daughters that have been carried off by the fever out of a family of eight children. Two more sons are down with the fever, but are reported doing well. The visitation has been fearful in this family.

Operator Ferguson, at Ead's Jetties, mouth of Mississippi river, is dead.

Operator Wiltshire, of Holly Springs, Miss., is dead.

Operator B. H. Coyce, of same place, died September 15.

Operator Geo. B. Swann, of Grand Junction, died September 19.

Repairer Wells, of Paris, Ky., died Sept. 23.

The following telegraphers have been stricken down since our last issue:

NEW ORLEANS.

Operator James Maloney, taken sick Sept. 19.

Operator H. C. Miller, taken sick 23d.

Messenger John Coakley, taken sick 23d.

Messenger John Slemma, taken sick 26th.

These are all reported doing well.

Operators Cottrell, Sheldon, and Smith, are convalescent.

MEMPHIS.

Operator W. E. Mulford, reported last issue as having sickness in family, was himself taken down on the 13th.

Operator L. Klotz, volunteer from Mobile, was taken sick September 15, but was convalescent September 25.

Operator J. B. R. Spaulding, volunteer from Baltimore, took sick September 19, but was convalescent September 29, and at work.

Operator C. R. Langford, of Montgomery, Ala., died Sept. 29.

Manager G. M. Baker, was stricken down September 23. He is being cared for at his residence, at Whitehaven, 6 miles south of Memphis, and doing well.

Operator C. T. Smithson was taken sick September 24.

C. A. Gaston, delivery clerk, who has been Acting Manager since Mr. Baker's sickness, was stricken down 28th.

Clerk J. M. Mullen, and Repairer H. E. Conley, are convalescent.

Operator Campbell, of Grand Rapids, Miss., was taken sick September 24.

Four of the family of Manager Flipper, of Baton Rouge, La., have the fever.

The operator at Tangipahoa is dead, supposed to be yellow fever.

turned from Grenada, has gone to Greenville.

Operator B. H. Lucas, Grenada, is sick.

Operators L. M. Pennington and John E. Hughes of Water Valley, are down with the fever.

Operators W. P. Johnson and B. M. Poynten, of Martin, Tenn., are sick.

J. W. St. Clair, R. R. operator, New Orleans, was sick, but is convalescent.

Southern superintendents receive large numbers of applications for positions in the infected districts, as does also General Superintendent Van Horne, of this city. Only a few men have, however, been sent from so far north, and some of those who had volunteered have subsequently, for various reasons, not gone.

J. Van Cullen Jones, of Philadelphia, volunteered and started for New Orleans, Sept. 28.

An operator from Boston volunteered for duty at New Orleans, but on reaching New York, and while stopping at French's Hotel, shot himself in the leg, or said he did, and was unable to proceed. Another from Philadelphia started for New Orleans by way of St. Louis, but, calling to see his mother in the latter city, that lady captured him, and positively forbade his going further. A third volunteer, from New York, after passes and every thing else had been arranged, reconsidered the matter, and did not think he cared to go. The number of applicants for places, however, are very large, and all the operators needed seem to be forthcoming.

PERSONS who desire to subscribe for the English telegraphic publications, the *Electrician*, weekly, and the *Telegraphic Journal*, semi-monthly, can do so through this office. Subscription, postage prepaid: *Electrician*, \$6 a year; *Telegraphic Journal*, \$3.

About Newspapers.

Mr. Day K. Smith, in the last number of the *Railway Enterprise* issued as an independent paper, after apologizing for the delay in the appearance of the paper and the neglect of many things connected with it that should have received personal attention, adds: "We never knew exactly how much trouble and expense attended the issuing of a new paper. We know more about it now." The italics are his. There is a world of satisfaction to an editor in that heartfelt confession from one who speaks from dear—very dear—experience, and is manly enough to acknowledge just where the shoe pinched, not skulking behind "want of time to attend to it properly," "sickness," or any of those other little subterfuges dear to the heart of unsuccessful editors.

An editor, of course, is sorry to see another's paper suspended. It often recalls occasions when he himself was not quite certain but that the darkness all around him was the financial valley of the shadow of death. And he can understand, too, what must be the feelings of the late editor. Few men who own and edit newspapers regard them merely from a money-making standpoint. On the contrary, they are almost as sincerely attached to them—if such a comparison can be made—as they are to their wives and families. Conscientious editors appreciate the responsibility of their positions, and are as careful of the language used in their papers as they would be of the conversation of their children. As every man desires to see his offspring respected and admired, so it is the aim of every respectable editor to conduct his paper in such a manner that its influence will be all for good, and that it will therefore merit the esteem and respect of its readers and the public. After having done all he can to establish it, if the paper is forced to suspend, the editor cannot repress a feeling of personal bereavement almost as poignant as would be called forth by the death of a dear friend.

Editing a paper is something that probably nine out of every ten men in the country think they can do better than anybody else. They imagine that there is absolutely no trouble about it, and that it costs nothing, or next to nothing, to run a paper. But let them try it, and they will soon find out their mistake. See how many papers have been started in our own profession, and to-day there are only two in the whole country, one of which is published by the Western Union Company as its official organ. There was, first, the *American Telegraph Magazine*—the first publication in the world devoted exclusively to telegraphic subjects, by the way—monthly, commencing October, 1852, of which only six numbers appeared. Then there was Shaffner's *Telegraph Companion*, also monthly, which only survived a few issues. This was followed by J. D. Reid's *Telegraph Review*, of which, we believe, but six (monthly) numbers were published, the cause of the suspension in each case being lack of patronage. Afterward there was the *Telegrapher*, recently deceased, and the *Telegraphic Journal*, which after a brief existence died, the *Journal of the Telegraph* almost immediately emerging from the ruins; *Telegraphica*, *The Switch*, Nos. 1 and 2, *The Plug*, and *The Fraternity*, were all short lived. More recently appeared the *Magnet*, published at Cincinnati, and the *Southern Operator*, published at Bolivar, Tenn. We have not seen copies of either of the latter for some time, however, and conclude that

they, too, have been gathered to their fathers. This long list of shipwrecks in our own country—there have been almost as many in England—will give some idea of the difficulties that had to be surmounted in establishing THE OPERATOR on its present firm financial basis. We mention THE OPERATOR only, for the *Journal* always has been an expense to the Western Union Company. And the papers devoted to other professions or businesses have had just as much difficulty in obtaining a foothold on life. Nobody who has not had actual experience would believe the expense attached to starting a newspaper, and keeping it running until it shall have reached a paying basis. It has been compared, and aptly, to pouring water down a rat-hole. There is hardly any end to it. On *Harper's Weekly* \$100,000 was expended before it commenced to pay; several hundred thousand was sunk in the *New York Times* before the investors began to see a return; *Hearth and Home* entailed upon its various proprietors losses not far from \$200,000 before it was finally suspended, and probably millions of dollars have been sunk on papers which the public have never seen. Most people believe they are cut out for successful editors, but let only those who have plenty of money to throw away try the experiment of starting a paper. The satisfaction of being able to say "my paper," for the very brief period it will probably live, will not be worth the hundreds, or perhaps thousands, of dollars it will cost them, not to speak of the distrust and suspicion with which everybody will regard them when it is known that they did not succeed.

War Among the Telephone Companies

We spoke some months ago of the rivalry between the Bell Telephone Company and the American Speaking Telephone Company being likely to lead to a legal contest to decide whether or not Professor Bell's patents, as claimed, cover all the principles involved in the several telephones at present in use, and whether persons using telephones without permission from the Bell Telephone Company are infringing Bell's patent. Suit has just been commenced in Boston by the Bell Telephone Company against the American Speaking Telephone Company, or, more properly, the Gold and Stock Telegraph Company of this city, and several others, to decide this question. The best patent lawyers in the country have been retained on one side or the other. E. N. Dickerson, of New York, who appeared for the Western Union in the recent quadruplex suit, and Chauncey Smith, of Boston, will appear for the Bell Telephone Company, and George Gifford, who acted for Professor Morse in his suits with Bain and others, will be the leading counsel for the Gold and Stock. The suit is brought in Boston on account of the delay that would ensue if tried in the New York courts, the latter being so crowded that it could not probably be brought to trial for four or five years. As it is, the Gold and Stock will perhaps be given about two months in which to file an answer. The other side will then know what the defense is to be, and the trial may proceed as soon as both sides and the court are ready. It is not thought that it can be definitely settled in less than two years, as the Gold and Stock will undoubtedly make a bitter fight, although an injunction may be obtained before the final decision by the suit or within a months. The defense can be pretty

accurately guessed from what Mr. Prescott says of Gray's and Bell's telephone in his late work on the speaking telephone and talking phonograph. The Bell Telephone Company have an advertisement in this issue, to which we would call the attention of our readers.

"CHRISTMAS Evergreens," the new holiday book mentioned in the advertisement on page eleven, is now in press, and will be ready some time during the present month. It will consist wholly of poetry, some of it telegraphic, and the remainder gems from the pens of Longfellow, Goldsmith, and other well-known poets. The book will be magnificently illustrated by about forty beautiful engravings drawn by strictly first-class artists, and handsomely engraved. It will be printed on thick, fine tinted paper, manufactured specially to our order for this work, and elegantly bound in best holiday style. Such books usually sell for \$5 a copy, but the cost of production is now very much less than it formerly was, and we propose to give the reader the benefit of it. In fact, we have decided to sell the book at only \$1.50 a copy, and even to give agents a liberal discount from that. At this price for such a book, we must sell a very large number to make it even pay expenses, but we feel confident that the book will be so handsome that, at this price, the sale will be so large as to return us a fair profit, which is all we ask. We shall have more to say of "Christmas Evergreens" next issue.

A TELEGRAM, dated Cincinnati Sept. 23, says that Israel D. Jewett, a druggist at St. Omer, Ind., has perfected an instrument which he calls the "agaphone," which, it is claimed, will, without the aid of electricity, carbons, or any complex machinery, collect distinct sounds and carry them to a great distance without loss of volume. A number of experiments were made with the instrument on Saturday, a wire being strung nearly half a mile. Speaking into the instrument three or four feet away, the words were heard clearly and distinctly at the furthest end of the wire. Playing upon a violin eight feet from the instrument, the music was heard at the other end in the street. The closing of doors, walking upon the floor, ordinary conversation, and the ticking of a watch, could be heard distinctly without applying the instrument to the ear. Mr. Jewett will not explain his invention at present, not having as yet received letters patent.

Themes for the Thoughtful.

The following lines were copied from the album of a young lady of Elizabeth, N. J.:

1. Three things to admire: Intellectual power, dignity, and gracefulness.
2. Three things to love: Courage, gentleness, and affection.
3. Three things to hate: Cruelty, arrogance, and ingratitude.
4. Three things to delight in: Frankness, freedom, and beauty.
5. Three things to wish for: Health, friends, and a cheerful spirit.
6. Three things to avoid: Idleness, loquacity, and flippant jesting.
7. Three things to fight for: Honor, country, and home.
8. Three things to govern: Temper, tongue, and conduct.
9. Three things to think about: Life, death, and eternity.

The Electric Light.

The subject of electric light is at present attracting much attention on both sides of the Atlantic. Mr. Edison's time has lately been mainly devoted to research in that direction, with, it is said, the promise of very satisfactory results. Hitherto it has not been practicable to divide the light, but Mr. Edison is now able to do this so well that the light can be distributed over a building in the same manner as gas jets, and lit at a moment's notice, without the use of matches, by merely pressing upon a small push button. This whole subject of electric light is so interesting and important at this time to those desirous of keeping abreast of present electrical inventions and discoveries, that it is believed the following history of that wonderful invention, with the accompanying description of the apparatus, will be acceptable to OPERATOR readers:

It is becoming pretty well determined that the electric light is shortly to be very widely employed in the illumination of city streets, public places, theatres, etc.; and the success of the invention, in its recent forms in London and Paris, has concentrated upon it a very large degree of public attention. Although the principle is not new, the successful application of it is quite modern. For years inventors struggled with the difficulties of constructing a machine to furnish the currents, and also with certain mechanical obstacles in the way of adjusting the carbon points, the burning of which provides the light.

It may be said that the discovery by Faraday of the principle of induction—the influence of a magnetized body upon a conductor brought within the limits of its field—led to the construction by Pixii, in 1833, of the first machine which transformed mechanical power into electricity. The form of Pixii's machine, which is fully described in all standard works on electrical science, is a horseshoe magnet fixed upright to a movable frame, and above the poles of the magnet are placed a pair of insulated wire bobbins, in the center of which are soft iron cores, yoked together at one end, and forming, when charged, a U-shaped electro-magnet. When the horseshoe or permanent magnet is rapidly revolved, a charge is communicated to the cores of the electro-magnet, which charge is conducted through the wires of the bobbins to such apparatus as is employed to demonstrate the action of the machine. Clarke shortly afterward improved this device by causing the bobbins to rotate in front of the flat faces of the horseshoe magnets, and employing a commutator by which the currents induced in the wires were caused to flow through the conductors in one direction. It must be understood that, without this arrangement of Clarke's, the currents would be reversed as the bobbins passed to the north and south poles of the magnet successively. Later, Mr. Holmes, an English optician, by combining a number of Clarke's machines, produced the first apparatus for electrical illumination, and its practicability was demonstrated by tests at the Dover lighthouse. Subsequently Mr. Wilde still further improved the machine, and others interested in developing this new source of light, adopting the suggestions of investigators of electrical problems, advanced the construction of the machine. Siemens, Gramme, and Lontin, abroad, and Farmer, Brush, and Weston, in the United States, have at last succeeded in bringing it into a practical shape. Gramme was the first to construct a machine giving a continuous current of electricity in one direction, without the aid of the commutators which Clarke used. The essential features of the Gramme machine are very powerful electro-magnets, which are charged either by passing a portion of the current around the coils, or, as in some cases, providing an armature especially to charge the coils.

In front of the cores the armature revolves. It consists of a ring of cast iron, around which is wrapped at right angles a number of separate coils of insulated wires, the terminals of which are connected together and attached to metallic contact pieces rigidly fixed to the shaft carrying the armature. These metallic pieces are so arranged that two of them, on opposite sides of the armature, are successively in contact with brushes of the machine, by which the current is conveyed to the wires leading to the lamp. As the armature is caused to revolve, the coils pass the faces of the magnet, receiving a positive or negative charge, according as their position may be relative to the cores of the magnets; and, passing the brushes before reaching a pole of opposite polarity, the charge is given in the direction

corresponding to the position of the brush rather than that of the magnet. The next charge given by that coil will be of opposite polarity, because it is brought into contact with the opposite brush after passing the contrary pole of the exciting magnet. If there are fifty coils on the armature, in each revolution there will be conveyed to the lamp twenty-five impulses, equally divided between the negative and positive, and as the number of coils is increased or diminished, the charges follow in the same ratio. The machines of other inventors are all more or less dependent upon the principles of Gramme, the differences being essentially those of detail.

It will be seen now that by the apparatus above described the difficulty of providing steady currents of electricity of sufficient power has been overcome. The charge of electricity can be increased to any extent by the enlargement of the machine. So much being established, the next item is the light itself. This is produced by the incandescence of carbon, which is a highly sensitive conductor. For this purpose it is prepared in sticks of various sizes, usually an inch square, and from six to twenty four inches in length. The lamp provided for the electric light was first practically suggested by Dubosque, and was afterward slightly modified and improved by Fresnel, Servin, and others, who have, however, maintained the essential feature of Dubosque's plan. This is a frame supporting the carbon pencils so as to bring their points nearly in contact, and actuated by the weight of one of the carbon holders, the motion of which is governed by an electro-magnet operating certain portions of the movement. By this means the carbons are brought together or separated, as circumstances require. The consumption of the carbons of course increasing the distance through which the arc of flame is to be maintained, the power of the magnet controlling the mechanism is diminished, and the top carbon falls by its own weight until the intensity of the flame is re-established. Then the magnet again attracts its armature, attached to which is suitable mechanism to check further motion of the parts until a change in the positions of the carbons, on account of their burning away, causes the release of the brake and a repetition of the action above described. The current of the machine passing through the electro-magnet of the lamp, the action is automatic, and when it is properly adjusted the charges are so rapid that the light is practically steady, and without the variations in intensity one would fear from a mere description of the apparatus. The Jubelchokoff candle, about which so much has been said, and which is being widely used in Paris, is simply another method of utilizing the current from the machines already spoken of, and does not embrace anything novel in machinery. It consists of two pieces of carbon, imbedded in kaolin (a kind of clay), with their upper sections bent so that they nearly form an arch—that is, they would form an arch if the points were allowed to touch. The company with which Jubelchokoff is associated, have adopted a peculiar modification of the Gramme machine, by which a greater number of lamps is supplied than had previously been found practicable. This is known as the Lontin machine, one of which, constructed for some experiments at the Lyons Railway Station, in Paris, provided for as many as seventy-two lights from the one machine.

From the perfection to which it has been brought, the light promises in the future to supersede for many purposes all present means of illumination. In fact, it is now sufficiently developed to encourage its adoption wherever a large amount of light is required, as in mills, factories, theatres, and similar establishments. It is a mooted question as yet among those who have investigated the subject as to the economy of the light. Figures given by different experts are widely at variance. The report of Professor Farmer to the Secretary of the Navy estimates 1,000 candle light per horse power as the average results of his experiments, but it is probably safe to assume that other figures placing the average at a higher intensity are not far in excess of what is now being secured in Paris and London from the machines above named. Companies are introducing the light in European cities at a stated sum per lamp per hour, under a contract guaranteeing a certain number of hours' use of the machine per month.

In this city there is some talk of introducing the electric light this winter as an experiment, but plans are not completely developed as yet. Mr. James E. Yeakle, of the Atlantic and Pacific Telegraph Company, a very studious and competent electrician, is interesting himself in the subject, and is in correspondence with various persons abroad who are advancing the use of the electric lamp.

Interesting Experiments with the Microphone.

Microphones are sold in England at prices ranging from seventy-five cents to five or six dollars. In this country, by reason of the controversy between Edison and Hughes, as to who is to be credited with the invention of the microphone, manufacturers do not seem to care to make or put the instrument on the market. If Edison's carbon telephone patents cover the microphone, as is claimed, the Western Union Company, to whom the patent has been assigned, would probably prohibit the manufacture or sale of the instrument in this country. The Lawrence, Mass., *American*, gives the following interesting account of experiments with the microphone in that city:

By the courtesy of Agent Fallon, of the Pacific Mills, who is quite an enthusiast in scientific matter, we spent a delightful hour a few days since in experiments with that latest marvel of discovery, the microphone, a little instrument which becomes to the ear what the microscope is to the eye. This is a discovery of Prof. Hughes, of Great Britain, who, while experimenting with the telephone, found a new element, through which he has succeeded in perfecting an instrument by which sound is magnified or increased, and conveyed by a wire in a wonderful manner. The microphone of Mr. Fallon, imported from England, is a simple little affair; a thin piece of deal, perhaps five inches by three, insulated by means of four bits of rubber, one at each corner, on which it rests; to this is attached a small, ordinary battery, a small piece of pure carbon is fastened with a bit of wire to the board, and another piece of carbon, like an inch and a half pipe—stem is pivoted near the center from little supports, one end resting upon the piece strapped to the board; the wires by which the sound is to be conveyed are attached to either corner of the board, and connected by other wires with the carbon vibrator and the battery; the carbon, highly charged as it is with mercury, possesses the power not only of conductivity and of reproducing sound, but of vastly increasing its power, and, as the microscope reveals to the eye of man the most insignificant of nature's works, so does the microphone disclose to our hearing otherwise inaudible sound.

Mr. Fallon has connected with his microphone some 600 feet of wire, and in the room at the other end an ordinary Bell telephone attachment. During the experiments which we made, with the assistance of Mr. Rideout, a watch was placed upon the instrument, and through the nearly one-eight of a mile of wire came to the ear not only the separate ticking, resounding like the heavy beating of a marine or tower clock, but we could distinctly detect the whirr of the minute wheels, the buzz and friction of the delicate machinery of the watch. Then the watch was removed, and the gentlest sweep of the down of a feather, brushed as lightly as possible across the board, reached the ear magnified to sound like the coarse grating of a file or the scraping of a heavy brush. Then a small wire cage, containing two common house flies, was placed on the instrument, and to the listening ear, 600 feet away, distinctly came the soft and irregular patter of the tiny feet, as the flies walked over the board, and as they flew from one side of their cage to the other, the sound as they struck against the fine wire was heard with a sharp metallic ring, altogether like that of the hammer of a boiler-maker, as he rivets the bolts in the iron cylinder. We were somewhat skeptical in relation to this last experiment, it seemed so much beyond credence, and the wires were detached, the annunciator fastened to the instrument, with only a few feet of wire, and we sat down in front of the little wonder, and with our eyes made certain that there was no possibility of deceit as to the source of the marvelous sounds to which we listened; but there was no difference, the footfalls of the fly came with no seeming greater distinctness than when transmitted through 600 feet of wire, and we see no reason why miles may not be added with the same result. Conversation in the room where the instrument was located, without the intervention of a mouth-piece, as in the telephone, was distinctly heard at the other end of the wire.

That proud leviathan of the deep—the "Great Eastern"—interesting to telegraphers on account of her services in laying the Atlantic Cable, is to be used as a cattle transport, and will ply between Texas and London. She will carry two thousand two hundred head of cattle, and two thousand six hundred head of sheep.

The Lontin Electric Light.

The electric light chiefly known to English visitors to Paris is the Jablochhoff candle, which displays its beautifully white glow from opalescent glass globes placed at a great height along the Avenue de l'Opera and among the trees of the Orangerie. There is, however, another electric light used in Paris by the Chemin de Fer l'Ouest, for example, which has just adopted the Lontin system for lighting the Gare St. Lazare, the station at which the traveler by the Newhaven and Dieppe route enters the French capital. The Lontin light is now exhibited in London outside the Gayety Theater, and by comparison with its pure white radiance the gas lamps of the Strand appear to burn with a dull yellow glare. So far as the illumination of open space, streets, and houses is concerned, the future, supposing gas to be to a certain extent superseded, appears to lie between the Lontin and the Jablochhoff light. The Siemens light has proved of great value for the purposes of light-houses, where great intensity is desired. For ordinary uses, however, the problem is to moderate, not to increase, the intensity of the light. The Jablochhoff and Lontin lights have many points in common, and, as the former light has already been described, it is unnecessary to enter into all the details of this method of illumination. The points of importance in each are the generation of electricity by a machine, the distribution of the current, and the supply and regulation of the "candles." To the Jablochhoff lights the electrical force required is supplied by a Gramme electrical machine. The Lontin light is worked by a machine invented by M. Lontin himself. It produces at will a unique current or multiple currents, direct currents, and inverted currents. These can be distributed on several circuits. A great advantage in distribution is thus obtained. The machine produces several focuses of light, which can be entirely independent of one another. With a single machine 36 lights have already been produced. The motive force employed to produce a light equal to 100 Carcel burners is half a horse power. A Carcel burner is a conventional measure, the standard of which is a Carcel lamp burning 42 grammes of purified colza oil in an hour. The electric force having been produced by the Lontin machine is conducted toward the "candles."

In 1813 Sir Humphry Davy took two hot coals, put them in contact, and made a voltaic current pass through them. He then slightly separated them, and saw between them a bow of fire, which he called the electric arc. The "candles" of the Jablochhoff and Lontin lights are sticks of carbon representing the coal used by Sir Humphry Davy. M. Jablochhoff employs kaolin in addition to carbon in a very ingenious manner, but the main superiority which the modern manufacturers of electric lights have over Sir Humphry Davy is in the superior economy with which electric force is now elicited. The carbons are vertically placed, one above the other, in the Lontin light as in that of M. Jablochhoff. The light comes not only from the electric arc between them, but also from the carbon candles themselves, which become incandescent and are consumed. A clock-work regulator advances them as they waste away, and it is stated that to such perfection has this contrivance been brought that for a week or more the lights at the Gayety have required no adjustment during the four hours for which they burn every night. Having once been set, the regulator has each night advanced the points without any aid from men. At Paris little accidents are not unrequited with the electric light. The Avenue de l'Opera is occasionally left in sudden darkness by some *contretemps*, and anything which renders this result unlikely to happen is, of course, an improvement. A Lontin light exhibited in experiments at the Paris Exhibition has remained luminous for twenty-one hours. The Lontin regulator and the Lontin machine are, it will have been seen, the specialty of this invention.

The lights at the Gayety are worked by a steam engine in the *Echo* office. For the display of the light as a novelty in a shop window a small gas engine would probably supply sufficient motive force to bring the Lontin electro-magnet into vigor. The wires which convey the current pass under the road to the theatre, and might be prolonged to Charing Cross, for instance, and Covent Garden Theatre, so that all three points could be lighted at once by the same machine. The advantages which this, like the other systems of electric lighting, possesses over gas have been summarized as follows: Gas emits a fetid odor; the electric light is without smell. Gas may occasion explosions and fires; the repairing of the pipes is often difficult; great heat is developed

together with the light; the flame is always colored even when gas has been completely purified. In the transmission of the electric light the pipes are replaced by wires; the voltaic arc diffuses very little heat (the hand may be held with impunity twelve inches above the Gayety lamps), and the light attained is white, perfectly compounded of all the colors in the spectrum, like sunlight. Indeed, it is so white that spinners and dyers can utilize it for sampling their stuffs. It may be added that the appearance of the lamps, when sufficiently roughened glass is used, is very beautiful.—*London Times*.

How Edison's Phonograph Might be Utilized.

As everybody knows who has had any experience in a telegraph office, the following questions, or similar ones, are asked by nearly every customer as he or she presents a message for transmission:

"How much will this message cost?" is generally the first question.

We answer, with our best smile, "Twenty-five cents."

"How much?"

We smile again, and answer, "Twenty-five cents."

"Will it be sent right away?"

The same smile illuminates our visage, as we assure the party that the message will be sent at once.

"How soon will it be delivered?"

The smile is yet visible, though faint, as we estimate making allowance for earthquakes, tornadoes, war, pestilence, and fires, and reply to the question.

"When can I have an answer?"

We are not smiling now, we ponder, usually spend from two to fifteen minutes on this question, and finally get over it as best we can. We try hard to smile, and look as if we were enjoying it, but somehow can't seem to make a success of it.

"Please send it right away" is the next thing hurled at us, before we have recovered ourselves. The next question is pretty sure to be something like this, "How far is it to Kalamazoo?"

We look through the *Counting House Monitor* and find out where Kalamazoo is, and all the particulars, but although we can smile in three languages, we don't even make an attempt at the next inquiry.

"What time does the next train leave?"

We once more consult the *Monitor* and furnish the desired information. Then we are assaulted with: "How much is the fare?" "Do you send money by telegraph?" "Why don't you send money?" and "Where do they send money?" etc., etc. By this time we are faint and weary. These questions being asked something less than a million times a day, and often times repeated by the same person, it becomes after awhile discouraging, and we sigh for a remedy. Therefore after much reflection I make the following suggestions for the benefit of my fellow sufferers.

Suppose we place one of Mr. Edison's phonographs just inside of the receiver's window. Then every morning yell into the machine appropriate answers to the foregoing questions. Now, the receiver having his answers all packed up ready for use, all that remains for him to do, when customers bombard him with questions, is to grind out the answers, which he can do with his left hand, or foot for that matter; or he might hire a small boy for about two dollars a year to manipulate the crank. It is not very difficult. Anybody that ever carried a handorgan can run the machine.

In more ways than one this machine might be convenient: for instance, suppose the phonograph had told a customer that his message would be delivered in an hour, and it should turn out afterward that the message occupied the best part of a week in reaching its destination, the receiver could not be held responsible. If a phonograph will lie about a message, the receiver is not to blame.

You can't expect too much of a machine.

Of course there are some questions that even a phonograph could not answer, but for the generality of questions I think this machine is just what is wanted in every telegraph office in the United States.

These are hard times, and phonographs cost money, but when we consider all that we suffer we won't quarrel about the expense. This idea has caused me many a sleepless night, but if it should be the means of supplying a long felt want, I am satisfied.

M.

Redding's Death.

Mr. W. M. Redding, of Grenada, whose death we recorded last issue, besides his duties as operator and ticket agent for the railroad company, also acted as correspondent for the *New York Times* and *Cincinnati Enquirer*. The latter paper pays a just tribute to his memory in the following words:

Bill Redding died yesterday morning. He was a hero without any of the brass ornaments or frippery of the battle-field to distinguish him from other men, but still with the heroic nature of the highest school implanted in him. Bill Redding was a bright young fellow of only twenty-three, with the vigor of youth, and the hope of a long life before him. When the yellow fever broke out at Grenada, he telegraphed the *Enquirer* a private message saying that the Yellow Jack threatened to give them a fierce tussle, but he would stay, and might be relied upon for the news. At first his dispatches were graphic and cheerful, coming from a brave man; but day by day, as the situation became more alarming, they changed in tone. They were still graphic, but the horrible scenes through which he was passing gave the eloquence of woe to what he wrote. One day he commenced his dispatch:

"To describe the scene is beyond the power of mortal man. Although the deaths are decreasing, it is not from an abatement of the disease, but from the want of material. Our little band of well ones are quickly counted, and we miss them hourly, requiring the strongest nerve and courage for us to battle against the plague-demon. We imagine we can almost see it in the air, and feel as though it were lurking around us, waiting for an unguarded moment to strike us down."

That gave an idea of what brave Bill Redding and his associates were doing for humanity. A week ago last night he sent another message, saying that he didn't know how long he would live, and wanted the amount of his compensation fixed; that he was braving the dangers for his mother and those dependent on him. A liberal sum was named for his services to that date, and still more for his future pay. Two or three days later his dispatches came with an apology at the foot, saying that he feared he could not write coherently, as the room in which he wrote contained four persons down with the disease and one corpse. The four persons were Bill Redding's wife, his mother, and his two sisters. The corpse was that of his child. Was it any wonder that he could not write coherently? Two days more elapsed and his dispatches came along as usual, only the woeful picture drawn in them increased in its dark colors. There was no hope at Grenada, but Bill Redding still remained battling in the face of despair. Then two more days passed, and there was nothing from Grenada. The office could not be reached by the wires. The town seemed to have dropped out of existence. Last Saturday the wire was opened again, and with its opening came the message: "Bill Redding is down with the fever. This for the *Enquirer*." Yesterday came still another: "Redding died this morning at half past 8." The hero had fought his last fight, and was conquered by him who conquers all.

Not in the din of battle, where courage is a matter of emulation, did he fall; not on the field of glory, incited by the example of those around him; but in meeting the pestilence that walketh by day, in the fulfillment of his duties to his fellow men was his life offered up—a sacrifice noble, heroic and pure.

The noblest place for man to die
Is where he dies for man.

New Orleans Telegraphers who Deserve Special Mention.

Allow me to furnish you a few names worthy to be inscribed on the roll of fame, and some facts concerning yellow fever convalescents.

Willis K. Woolf, operator W. U. office, visited the sick, attended to their wants, and otherwise did his duty well, nobly standing at his post until claimed by the fever—and death. He was so worn down with over-work that he had not strength to resist the progress of the dread disease.

Next F. B. Moxon, room-mate and cherished friend of Mr. Woolf, still feeble from an attack of yellow fever, visited as many of his friends as his strength would permit. Brilliant, talented, and of high rank among the telegraphic fraternity, and giving fair promise of a useful and brilliant career, he succumbed to the ever-envious death. Mr. Moxon's death was caused by a relapse, brought on by imprudent over-exertion, both mental and physical.

Mr. Maloney and Mr. Haight, employes W. U. office, have rendered active assistance to those in distress.

Mr. A. D. Babbitt, operator W. U. office, and chairman of the Telegraphers' Relief Committee, also deserves a tribute to his noble efforts in behalf of the stricken ones. Setting aside his natural horror of the fell disease, he manfully visited the sick, and, when called upon, sat up with them and waited upon them until death rendered further service unnecessary.

Last, but by no means least, is Dr. Y. J. Woolf, operator W. U. office. Long may God preserve him to perform the noble work which he has undertaken in stricken New Orleans. All day long attending yellow fever patients for the Howards, saving many lives which would otherwise have been lost, and then performing his nightly duties at the office, he would be utterly exhausted but for the sometimes merciful relief of his friend Mr. Babbitt.

In the last issue of THE OPERATOR I observed two errors, which I would like to correct, hoping that you will not take offense. Mr. J. H. Riedick has not had the yellow fever, and is just as well as usual. Bread and fruit are never given to yellow fever convalescents—bread being too heavy, and fruit, of any kind, fatal in causing relapses. For the first week or so after the fever leaves them the patients live on beef tea, chicken tea, boiled milk (with lime-water), broiled chicken (very young), broiled beef, and light crackers. Not all in one day, and in very small quantities. MYSTIC.

NEW ORLEANS, LA., September 21st.

Telegraphers' Rifle Club.

The third monthly competition for the Sharp's Mid-range Rifle took place at Hartung's Park, Mott Haven, on Saturday, September 21st, distance 200 yards, Creedmore target. The following were the scores:

1. M. W. Doran.....	41	11. G. W. Chandler.....	34
2. A. Metzger.....	40	12. H. Witt.....	34
3. C. D. Haskins.....	39	13. J. J. Metzger.....	33
4. P. Hoenecke.....	39	14. R. Maczoe.....	32
5. T. Loring.....	38	15. W. Lockert.....	29
6. P. B. Westervelt.....	38	16. G. Hauser.....	29
7. H. Baer.....	37	17. R. Fousholm.....	28
8. Geo. T. Mussen.....	36	18. W. Freeman.....	9
9. C. Lamberly.....	35	19. H. Miller.....	7
10. A. A. Knudson.....	35	20. J. Stiner.....	0

Echoes from 197.

Osgood S. Wiley and Gertie Rafferty were married Sept. 22d.

W. Maver, Jr., is in Montreal, to witness the great boat race.

Jimmie Bradt and A. R. Wright have returned from Saratoga.

F. H. Blanchard is spending his vacation at Fort Edward, N. Y.

We regret to hear of the death of a brother of Mr. James H. Lyman.

Frank Cox was recently presented with a new sounder—a fine boy.

E. V. Weedon has been transferred to New Orleans, and Dick De Klyn to Memphis.

Mr. Burt, from the Catskill Mountain House, is working on the western way wires.

The first class operators on the day force have been augmented by Mr. P. J. Tierney.

Messrs. W. C. Pearce and S. A. Coleman have changed their base and joined the night force.

Hank Bogardus, one of the most widely known telegraphers in the Union, is on the night force.

David McKeen has left the service of the W. U. His conduct toward his family does not reflect credit upon him.

A telegram to mechanical engineer Bagley announces the safe arrival of Mr. O'Reilly at San Francisco.

The work that Mr. W. J. Landy, of the 2d Chicago quadruplex, turns out is alike creditable to himself and the office.

"Senator" Ives, who had charge of the office at Norton's Hotel, Coney Island, during the past summer, is working at 197.

An operator was wanted at Hudson, N. Y., last week, to work thirteen hours a day for forty dollars a month. And yet Mr. Twombly is not happy.

John Ashhurst, of the Jersey City Fire Telegraph, was thrown from his wagon on Monday last, while on his rounds of inspection, and was seriously injured.

Thomas H. O'Reilly left for San Francisco Sept. 16th, to take a position in the W. U. office in that city. Mr. O'Reilly's service for the old American and Western Union companies in this city covers a period of fifteen years, and he has left an enviable record as a faithful employe and an honest man.

A brilliant and successful lawn party and concert, in aid of the yellow fever fund, was given by the ladies of East Bridgeport, Conn., Sept. 17th, on the spacious grounds surrounding one of its most beautiful residences. Messrs. D. W. McAneeny and G. K. Walcott, of "197," kindly volunteered their services, and their solos and duets proved the attraction of the evening, and were received by the large assemblage with applause, and redemanded.

Dashes Here and There.

The poles are all set on the government line from Deadwood to Fort Keogh, Montana.

Rev. Canon Bagot, of Athy, England, is to try harvesting at night this autumn, with the aid of the electric light.

Chauncey Raymond, Perry Chamberlain, and Mat. Hickey, of the W. U. main office N. Y., started for Chattanooga, Tenn., on Sept. 28th, to fill vacancies at that point.

Kearney has asked Edison to invent him a new article of profanity—some swear words that will fairly sizzle when they are hurled at "bloated bondholders," and curl him up like a green cucumber. We hope Edison will invent nothing of the kind.—*Norristown Herald.*

The French have refused to award a premium to Edison's phonograph at the Paris Exposition. Just as might have been expected. If the phonograph had been a contrivance to make a new kind of wine, or to cook bullfrogs, the French would have awarded it a big gold medal.—*Detroit Free Press.*

An improved Mechanical Telephone has been patented by Messrs. Schuyler S. Parsons, Francis R. Shaw, and George N. Daniels, of Chatham Center, Ohio. This invention consists of a diaphragm of cloth or other textile fabric, mounted in an open wooden case. The transmitting wire branches out into a number of smaller wires, jointed to the main wire and attached to the diaphragm. The main wire is hung to insulators, made of sheepskin, placed in a frame with a central opening, the frame and sheepskin being slitted, and the latter re-enforced at the slit.

Professor Bell, the inventor of the telephone, explains why it is that inventors are more numerous in America than in England, by the statement that invention is not encouraged in the latter. "If you wish," he says, "to know how it feels to be brimful of ideas, and yet to be unable to have one of them executed, come to England. If you wish to know how it feels to have to wait a month to have the simplest thing made, and then to be charged a man's wages for two months, come to England." The professor illustrates still further by narrating a bit of personal experience. In 1874 he submitted his invention of multiple telegraphy to the British Government. In reply to his request for an investigation he received a printed paper, such as probably was sent out to every inventor who applied to the Postal Department. It stated that the Post Office Department would take into consideration the invention submitted at the expense of the inventor, and that in the event of the improvement in telegraphy being thought worthy to be adopted by the government, the question of remuneration would be left entirely to the Postmaster General. Whereupon the professor brought his invention out in this country.

PERSONALS.

Mr. N. S. Satterthwaite, of Tecumseh, Mich., called at THE OPERATOR office last week.

The operators of Trenton, N. J., raised \$45 for the telegraphers attacked by yellow fever in the South.

Miss Lida A. Churchill, who has been on a visit to her home friends, has returned to duty at Northbridge, Mass.

Mr. Geo. M. Myers, of U. P. R. R., Omaha, Neb., who was seriously ill with typhoid fever, has entirely recovered.

E. C. Bishop, formerly with the W. U. Co. at Karns City, Pa., is working for the S. W. P. R. R. Co. at Everson, Pa.

Mr. Jesse Rankin, manager of the Northampton, Mass., W. U. office, is spending a few weeks in the Adirondack region. Mr. J. V. Allen, of New Orleans, is subbing for him.

Dr. T. Jeff. Woolf, of the New Orleans Western Union office, has gone to Winona, Miss., in response to an appeal from that place to the Howard Association for an extra physician to assist in fighting the fever.

Mr. Wm. E. Smith, a well-known Pacific Coast telegrapher, has purchased an interest in the Pioneer Reduction Works, San Francisco, and now devotes his time to buying and reducing gold, silver, and copper ores, which probably pays better than waiting the fluid electric.

At a quarter past five o'clock, Sunday, Sept. 8th, the quiet village of Drain, Oregon, was aroused by the alarm that Milton Perkins, a telegraph operator of that place, was under the saw-logs in the mill dam just above the town. A general rush was made for the scene. On arriving there, it was found that he had been taken out, but life was extinct. Everything possible was done to bring him to life, but to no purpose. D. ceased was a very exemplary young man, about nineteen years of age, of good, steady habits, and well liked by all who knew him. He was engaged in teaching school a few miles from Drain, and was spending the Sabbath with his parents.

Speaking of the telegraph operators who have stuck to their posts, or who have volunteered to take the places made vacant by death, the *Scientific American* says: No more splendid heroism was ever displayed than by young Redding, of Grenada, and others like him in every fever smitten town. To labor as they have had to in the midst of peril, while kindred and friends were fleeing or dying, passively enduring privation, exposure to the disease, ceaseless emotional strain, and the prospects of a sudden and terrible death, that the afflicted may not be deprived of means for making known their condition and wants, calls for more patient and sterling heroism than is required even in the watchers in the chambers of death.

The discussion in regard to the Chamber's theory of "no ground" lightning rods, has developed quite a lightning storm among some of those who have taken an active part therein, though it is not believed that anybody will get "struck." Mr. Shaffer writes to Mr. I. N. Miller that in his letter—a portion of which was published in last issue of THE OPERATOR—he (Miller) "displays the largest portion of his make-up, which can be justly denominated 'cheek,' as well as his true inwardness, which he (Shaffer) will term 'meddling';" and concludes by saying that he has lived fifty years, and always found plenty to do in attending to his own business and letting that of other people alone. To this Mr. Miller replies that if Mr. Shaffer has arrived at the conclusion that a person who argues a scientific question when it is being advocated before the public is a "meddler," and possesses excessive "cheek," then in his opinion the fifty years that Shaffer has lived has been a miserable waste of time. "From your letter to Prof. Tice," he adds, "I took you to be one who sought information. If you only want to be 'let alone,' you can be accommodated by keeping your name in obscurity, where it properly belongs."

BIRTHS.

To S. D. Sprigg, operator W. U. Tel., Baltimore office, a son; and to C. G. Stuart, same office, a son.

August 30, to W. M. Sharp, agent and operator D. and B. B. R. R., Trenton Junction, N. J., a daughter.

MARRIAGES.

HALLEY—SMITH.—Sept. 13, at Cheyenne, Wyo. Mr. James W. Halley, manager C. & B. H. Tel. Co. Deadwood, to Miss Lottie Smith, of Cheyenne.

DEATHS.

Suddenly, Sept. 18th, of congestive chill, R. N. Ring, of the N. C. R. R., Baltimore, Md., aged 22.

Wm. E. Spaulding, formerly of the W. U. Baltimore office, but later with A. & P. Co., same city, aged 23; consumption.

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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

October 15th, 1878.

Volume IX.

Whole No. 112.

In Memory of the Telegraph Operators Who Died of Yellow Fever.

Amid the gloom of fever's rage,
And fatal germs that taint the air,
The voices, cheerful once, give place
To tones expressive of despair.

Late crowded marts and business streets,
Deserted now and silent are,
Save when disturbed by mournful tread
And rumbling of the funeral car.

Ah! who could tell the next to fall,
Before the strong but unseen hand;
As desolating in its power
As sword's keen edge or flaming brand.

But 'mong appalling dangers there,
By strongest ties of duty bound,
The timely and the needful aid
Is near the prostrate victims found.

Sincere and resolute of heart
Are those who scent the feverish breath,
Not thinking that their names may be
Soon added to the roll of death.

Among such spirits dwelling there,
Are men of young but dauntless heart;
Who, though they may not nurse the sick,
Perform for them a generous part.

Without them how could tidings fly,
And messages be sent for aid,
While telling to the world the tale
Of suffering by the fever made?

Ah! some have fallen at their post
Whom none had power to bid remain—
Brave volunteers in noiseless war,
Now heroes honored with the slain.

The instruments by them employed
To o'er the land sad stories spread,
Where means in other hands to tell
That they were numbered with the dead.

Though far beyond the words of praise
Are those forever from us borne,
While speaking of their acts of love
We join with kindred hearts that mourn.

When history shall narrate the deeds
Of men who fell with gloom around,
Upon the roll of victims will
No brighter names than theirs be found.

L. A. GOBRIGHT.

WASHINGTON, D. C., October 9, 1878.

Western Union Annual Report.

The annual meeting of the Directors of the Western Union Telegraph Company was held in this city on Wednesday, October 9th. From the President's report it appears that the capital stock of the Company is \$41,073,410, of which there was in the treasury belonging to the Company, at the beginning of the year, \$7,255,335. From this there has been transferred and reissued 12,500 shares, in part payment for the purchase of Atlantic and Pacific Telegraph Company stock, and five shares in the purchase of stock of leased companies, leaving the amount in the treasury \$6,004,835, and the amount outstanding on the 30th of June, 1878, \$35,068,575. The total bonded debt is \$6,178,941.64.

During the year, \$125,000 of the building bonds of 1902 and \$10,206 of the sterling bonds of 1900 were redeemed by the trustees of the sinking funds. There were also purchased and canceled \$39,000 of the currency bonds of 1900, with the balance of the previous year's sinking fund appropriation for such bonds, which was returned to the Company by the trustees, because the holders of drawn bonds to that amount did not present them for redemption.

The revenues accruing to the Company, for the business handled during the year, were... \$9,335,810 67
The expenses, (including rental of leased lines), were... 6,172,810 90
The profits, (after reserving amount sufficient to meet the claims of the Atlantic & Pacific Telegraph Company, under existing agreements), were... \$3,161,999 77

From this there was applied, for four quarterly dividends of 1 1/2 per cent each, \$2,103,726; for interest on debt, \$453,741.52; for sinking funds appropriations, \$79,970.40. The construction of new lines and erection of additional wires during the year cost \$216,320.93, and the purchase of sundry telegraph stocks (other than Atlantic and Pacific), patents, etc., \$44,758.49.

The net profits for twelve years, from July 1st, 1866, until June 30th, 1878, were \$35,933,822.70, of which \$14,225,713.84 was paid the stockholders as dividends. The following statistical tables show the operations of the Company for the above twelve years; the annual increase in lines and wires, offices, traffic, and of messages per mile of wire; the steady reduction in the average rate of tolls per message, and in the cost of transmission, with the annual average profit per message. A reference to the figures in these tables, continues the report, will show a larger increase of lines and wire during the past year than in any one year since 1874, a larger increase of telegraph offices than in any year since 1872, and a larger increase in the number of messages sent than in any previous year, being an increase of 2,759,953 messages, or over thirteen per cent.; while, notwithstanding the friendly arrangement with the Atlantic and Pacific Telegraph Company early in the year, and advance of some competing rates, the reduction of four and seven-tenths cents per message, or ten and eight-tenths per cent., on the average rate of tolls collected, compares favorably with previous years; and the reduction of four and eight-tenths cents per message, or sixteen and one-tenth per cent., in the average cost of transmission, is the largest reduction of expenditures, in proportion to the work done, ever effected in any previous year. These reductions demonstrate that one telegraph company, having all the business to handle, and relieved from the expenses of numerous competing offices, can afford to do the business of the country at lower rates, with a living profit, than it could be so done if divided between two or more companies.

Statement showing the Mileage of Lines, number of Offices and Traffic of the Company for each year from June 30, 1866, to June 30, 1878.

Year.	Miles of Line.	No. of Offices.	No of Messages Sent.	Receipts.	Expenses.	Profits.
				\$	\$	\$
1866.	37,380	2,250		6,568,925.36	3,944,005.63	2,624,919.73
1867.	46,270	2,565	5,879,282	7,004,560.19	4,362,849.32	2,641,710.87
1868.	50,183	3,219	6,464,095	7,316,918.30	4,668,116.85	2,748,801.45
1869.	52,099	3,697	7,934,933	7,138,737.96	4,910,712.42	2,227,965.54
1870.	54,109	3,972	9,157,646	7,637,418.85	5,194,387.19	2,532,661.66
1871.	56,032	4,696	10,646,077	8,467,095.77	5,696,863.16	2,770,232.61
1872.	62,032	5,237	12,444,499	9,333,018.51	6,571,055.85	2,761,962.66
1873.	65,751	5,740	14,456,832	9,283,653.96	6,755,733.81	2,527,920.15
1874.	71,581	6,189	16,329,256	9,564,574.66	6,335,414.77	3,229,159.89
1875.	78,831	6,565	17,153,710	10,034,983.66	6,635,473.65	3,399,509.97
1876.	78,731	6,772	18,729,567	9,812,312.61	6,672,294.94	3,140,017.67
1877.	76,931	6,590	21,158,941	9,861,335.23	6,309,812.35	3,551,522.70
1878.	81,000	6,014	23,918,894			

Statement showing the number of Messages Transmitted per Mile of Wire, together with the Average Tolls, Cost of Transmission and Profit per Message, for each year from June 30, 1867, to June 30, 1878.

Year.	Miles of Wire.	Number of Messages Sent.	Number of Messages Annually Transmitted per Mile of Wire.	Average Tolls per Message.	Average Cost of Transmission per Message.	Average Profit per Message.
				Cts.	Cts.	Cts.
1868.	37,380	2,250	66	104.7	63.4	41.3
1869.	46,270	2,565	76	89.3	64.7	24.6
1870.	50,183	3,219	82	75.5	51.2	24.3
1871.	52,099	3,697	88	69.5	45.7	23.8
1872.	54,109	3,972	91	62.2	43.6	22.4
1873.	56,032	4,696	93	62.5	43.4	19.1
1874.	58,032	5,237	96	54.9	39.5	15.4
1875.	62,032	5,740	94	54.	35.2	18.8
1876.	65,751	6,189	102	50.9	33.5	17.4
1877.	71,581	6,565	109	43.6	29.8	13.8
1878.	76,931	6,590	116	38.9	25.	13.9

Statement showing the Annual Increase in the Lines, Wires, Offices and Traffic, and Decrease in the Rates of Tolls, from June 30, 1866, to June 30, 1878.

YEAR.	Miles of Line.	Miles of Wire.	No. of Offices.	No. of Messages.	Ann'l Decrease in the Average Tolls per Message.
					Cts.
1867.	8,890	9,605	315		6.5
1868.	3,913	12,303	654	625,813	13.3
1869.	1,916	6,990	338	1,830,338	13.9
1870.	2,010	7,67	365	1,322,713	6.
1871.	1,943	8,967	634	1,488,431	3.3
1872.	6,001	16,039	631	1,798,422	3.7
1873.	3,724	17,282	503	2,012,333	7.7
1874.	5,828	21,263	448	1,872,424	9.
1875.	1,248	3,761	377	824,454	3.1
1876.	699	4,336	677	1,675,857	7.3
1877.	3,423	10,491	428	2,429,374	4.7
1878.	4,047	11,879	614	2,799,923	

Total increase.. 43,622 130,516 5,764 18,639,612 Total Decrease.. 66.8

The Western Union owns nearly three-fourths interest in the International Ocean Telegraph Company. Out of the capital stock of \$1,500,000, the Western Union owns \$1,038,500; the Company itself owns \$97,800; and there is owned by other parties \$364,200.

The net earnings of this Company for the year ending June 30, 1878, were \$254,204.05. It has paid regular quarterly dividends at the rate of 8 per cent. per annum, and paid over \$100,000 of its bonded debt during the year, and had a surplus at the close of \$51,072. It has further bonded liabilities, amounting to about \$130,000, which mature, and will be paid during the ensuing year, from its surplus earnings, without interfering with its regular dividends, and it is confidently believed without any reduction of the surplus.

The Gold and Stock Telegraph Company has a capital stock of \$2,500,000, of which it holds in its treasury \$55,075, and the Western Union Company owns \$1,195,250, or a little less than half the stock outstanding. The net earnings of the Gold and Stock for the year ending June 30 were \$264,093.15, out of which were paid quarterly dividends, amounting to six per cent to stockholders, \$32,700 in interest on bonds, and over \$43,000 for construction and purchase of lines and patents. The surplus of \$36,000 has nearly all been invested in the American Speaking Telephone Company, of which latter Company the Gold and Stock Company owns a two-thirds interest, and has the control and management. The Gold and Stock Company has a bonded debt of \$500,000, maturing May 1, 1885, of which it owns and has in its treasury \$65,500, and the Western Union Company hold \$1,000,000. The earnings of the Company show an increase over the previous year; and the prospect appears quite as favorable for the ensuing year.

The reduction made to the public in the average tolls per message during the previous year, adds the Report, resulted in a reduction of the profits, and loss to the Company of over three and a half cents per message; but during the last year a still larger percentage of further reduction in the average rate of tolls has been made to the public, without reducing the average profit per message to the Company; and it is confidently believed that the economies in expenditures now fairly inaugurated will be found to justify still further reductions in its average rate of tolls to the public, without reducing the average profit per message, but securing a further increase of business, and of net revenues to the Company. In fact, the reduction of expenditures and increase of revenues shown have all accrued during the last half of the year; the first half having to compare with the autumnal half of the year 1876, in which the Centennial Exposition and Presidential election rendered the business very large, showed an actual falling off, which was more than made up during the other half of the year. And since the close of the fiscal year the gains to the Company in both respects have been, are at this writing, and promise to be during the ensuing year, much larger than any such gains previously realized.

It is proper to note, says the President in conclusion, at this first meeting of the stockholders since the sad event, the loss of our late President, William Orton, whose great ability, and unremitting energy and application during the last twelve years, have contributed more than any other, and, perhaps, more than all other men, toward the growth, extension, good will, and marked success of the Western

Union Telegraph Company. In his death the Company sustained an irreparable loss; and it is fortunate his invaluable services were spared the Company until its success had been so permanently established on so extended and solid foundations.

Revealing Political Secrets of the Telegraph.

Considerable of a sensation has lately been produced by the publication of translations of a number of political cipher dispatches sent during the late Presidential campaign. The Washington correspondent of the New York *Herald* tells how these cipher messages came to light, and what the late Mr. Orton did to prevent a great political scandal, substantially as follows:

In the month of February Mr. Field's committee in the House (and Senator Morton's committee in the Senate almost simultaneously demanded of the Western Union Telegraph Company the election dispatches of both sides. Mr. Orton, then president of the company, refused to surrender them, and here begins the curious story which is whispered in Washington Democratic as well as political circles. It is said that Mr. Field had obtained possession of copies of a number of Republican dispatches, some of them damaging to persons at least as high as Senators, and others of them in cipher, but hinting at matters and suggesting things which it was believed the Republicans would not like to have disclosed to the public. He, it is said, wished to get hold of the whole Republican correspondence, believing that this would enable him to decipher some dispatches already in his possession and to make clear the meaning of others. It is added that before requiring the production of the Republican dispatches he prudently consulted Mr. Hewitt, the chairman of the Democratic National Committee, as to whether any damaging discoveries could be made against the Democrats, and that Mr. Hewitt assured him, for himself and for the National Committee, that he might safely go ahead, because there was nothing on the Democratic side which would not bear the light. Thereupon he demanded the dispatches; the Senate Committee at once issued a similar requisition, and Mr. Orton, formally refusing in order to gain time, went to Washington.

The following is the story of what he did there. It is said that he plainly told a Democratic and a Republican Senator in a secret interview:—"You are threatening the country with a horrible scandal. I am trying to prevent it by refusing to give up the dispatches. But I wish you to know that I have no notion of going to jail to please any of you. If you insist on their production you shall have them, but they will not help either party. They convict conspicuous men on both sides. I know what I am talking about, and to prove it to you I will show you two or three examples of what your investigation would bring out against both sides, if you force me to give up the dispatches." Whereupon, it is said, he showed to these two Senators, one Republican and the other Democratic, certain dispatches compromising persons of a good deal of importance on each side. It is said that the two Senators, each for himself, thereupon declared that they were not inclined to stand behind anyone who had done wrong; that, so far as they were concerned, they would insist on the production of the dispatches, and that they were not disinclined to see political ruin overtake men who had acted the part these dispatches seemed to denote.

Thereupon Mr. Orton determined to surrender the dispatches, and the story says, caused them to be sent to the Senate committee; and when they got there, Senator Morton, as chairman of that committee, fully alive to everything which might damage the Democrats, or prevent damage to the Republicans, made a careful secret examination of them, in the course of which he found the cipher dispatches now getting published, and other matter so dangerous to the Democrats that at first he was inclined to fling the whole before the public as the best way to ruin Mr. Tilden's hopes. But he and the one or two whom he took into his confidence soon saw that the work of deciphering the dispatches would take a great deal of time; they saw also, it is said, that a one-sided exposure would not be permitted by public opinion, and that if both sides were to be shown up, the Republicans would also be disgraced. Thereupon, the story goes on, Senator Morton determined on a shrewder and further-reaching stratagem. He bundled up the Democratic and Republican dispatches together, and having put them into a safe place, called to him two prominent and influential Democrats, and said to them, "Gentlemen, you ought to stop this filibustering, and all

this talk about revolution and an army to force the inauguration of Mr. Tilden." They replied, "We are not in favor of filibustering or of revolution, as you very well know, Senator."

To this Senator Morton replied: "I understand that; but you ought to use your great influence upon those who are. You ought to stop Mr. Field; you ought to stop Watterson's silly and dangerous schemes for revolution." To this the two Democrats are said to have rejoined that while they were in favor of carrying out the agreement involved in the Electoral Commission in good faith, they yet felt that a gross injustice and more was being done; that they firmly believed Mr. Tilden elected, and that they were not disposed to interfere in any peremptory way to stop the resistance which other Democrats were making to this move; they preferred to let the contest go on because they sympathized with the indignation and bitter sense of wrong which was felt by their fellow Democrats who were filibustering and threatening revolution. So this, it is said, Morton replied, "The Democratic Party cannot afford to inaugurate Mr. Tilden, and I will show you why. You may filibuster and carry the count past the 4th of March, and you may forcibly inaugurate Mr. Tilden either here or elsewhere and thus plunge the country into a revolutionary condition; but whenever you do this—when you are fully committed to it—I shall make public certain dispatches, of which I will now show you some samples, which will prove to the country that your candidate first tried to bribe his way into the White House, and, having failed in that, now tries to secure the object of his unscrupulous ambition by revolution." Hereupon, it is said, he showed to these Democrats such dispatches as proved to them that they, at least, could not afford to tolerate anything like a violent attempt to seat Mr. Tilden. When Senator Morton had seen that his revelations had produced the effect he expected upon these gentlemen, he said, "Your people might perhaps make unpleasant discoveries on our side if we push this investigation; but you cannot discover anything which will commit or convict our candidate. You cannot show him to have taken any personal part in anything that was done, or to have had any knowledge of a relation to dubious transactions. But what I have shown you proves that you Democrats cannot afford to filibuster or to attempt a forcible inauguration of your man. The revelations which would follow would cover you all with unending disgrace. I ask you, therefore, to go to Mr. Field and to Mr. Watterson in confidence, and tell them from me why they must stop all filibustering and revolutionary plots, and let the count proceed." And it is said that this revelation, duly made, was what drew the fires from under the boilers of those Democrats who were, until that time, bent on a forcible inauguration of their candidate.

It is not definitely known what became of the dispatches, but they are believed to have been kept by Morton and to have been among his papers when he died. Some of the messages are curiosities in their way: "Doctors plenty; rainy weather. Is sea smooth? Have Jones ready." "Cold reports here; doctors scarce; cotton fever spreading; raining here. Answer."

Then there is the information that the sea is safe, that cotton is high, and that men are coming. At another time, "twenty apples" and a lot of "small cherries" were telegraphed for; and at still another it was frankly stated: "In order to prevent frauds, we must have money. If Florida is important, authorize me to draw on you for two thousand dollars. Answer."

Electric Lighting.

The advancement made of late in lighting by electricity is so full of promise, of such general interest and importance to the public, that we give, in order to call attention to some of its advantages which are not generally understood, a brief extract from a report from M. Delahaye to the Industrial Society at Rouen, referring to the lighting by electricity at the works of M. Manchon, an extensive cloth manufacturer.

"On entering M. Manchon's factory, one is favorably impressed by a striking sense of intense brightness, excited more by the nearly entire suppression of shadows than by the brightness even of the light which pervades the shed. The workmen are very well pleased with the light obtained. The foremen, who, no doubt, are best able to form a comparison between the two lights, since they never quit the building, do not hesitate to declare that the electric light is much superior to the gas light, and that the women, like themselves, are much less fatigued after

the long hours, by reason of the absence of the heat radiated from the gas reflectors which were immediately over their heads." M. Manchon has also pointed out to me a considerable advantage in the new light, due to the well known property of the electric light of not altering even the most delicate shades of color; the errors formerly fallen into by the workmen in renewing broken threads, or in refilling the shuttles, being thus prevented. The quality of the product is, in consequence, sensibly improved."

Comparative estimates of the cost for lighting on various systems might be given, from which the great advantage of the electric light over all other systems of lighting for equal powers would be shown.

Should electric lighting eventually supersede all other methods, as now seems very probable, it will, of course, seriously interfere with the consumption of coal, and probably cause considerable reduction in its price, and will, happily, relieve the public from the too common oppressive monopolies of gas companies.—*Scientific American*.

The prophecies of ancient monks and writers in reference to modern inventions is certainly a little wonderful. In the "Voyages Fantastiques de Cyrano de Bergerac" recently republished by the Librairie des Bibliophiles, there is a tale entitled, "Histoire Comique des Etats de la Lune," which contains an account of a mechanical book which uttered what it had to tell like the phonograph. Cyrano de Bergerac was a kind of Jules Verne who flourished two centuries ago.

The Outlook of Electricity.

It has often been remarked that of all the sciences there is none which has been of more vigorous and rapid development than electricity. Long hidden in the dark womb of nature, like a spellbound genie, or a faculty asleep in the soul, it has within these latter generations sprung into quick existence, growing like a giant, and doing a giant's work. With all its practical power there is a brilliancy about its marvellous effects, which renders it a most fascinating pursuit—perhaps the most fascinating science of all. And this very shining quality has had an untold effect in furthering its own increase. The minds of men, however philosophical they may be, are ever fascinated by the miraculous and lured by the beautiful. What wonder, then, that electricity, whose effects are so beautiful, and wondrous so miraculous that to the uninitiated they seem to be creations of the magician, should number among its admirers and votaries all kinds and conditions of men. It has been said that a science progresses by the compound interest law, but electricity, at least, is an exception to this rule. The recent burst of electric invention, indeed, points to a more complex order of development than can be expressed by any known formula. Human genius, as altogether incalculable thing, must be taken into account in science, even as it is taken into account in poetry. The telephone and the microphone are pregnant factors in the advance of electrical science, corresponding to cataclysms in the uniform process of evolution. They have of late carried the science forward by a jump, and it is natural now to pause and view the outlook ahead.

The Victorian era will be ever memorable in history as the nurse of the steam engine, of gas lighting, and of the electric telegraph. But it does not require a prophetic eye to foresee the time when electricity will supersede both gas and steam. Man uses first those resources of nature which are nearest to him, then seeks out and utilizes those which lie deeper. He hunts the wild animal crossing his path, then herds it on the grass, then tills the surface soil, then digs up coal and metal from the bowels of the earth, and at last when these palpable resources begin to fail his hand and sense, he looks into the secret store-room of matter with the eye of intellect, and discovers new mines of power even richer than the old. At present we are consuming one hundred and fifty million tons of coal per annum, and this waste cannot go on forever. Our coal fields will inevitably become exhausted. But shall it then be necessary to buy our coal from other countries, say from our more prosperous "kin beyond the sea," as Mr. Gladstone poetically calls our American cousins, who doubtless in the shabby future which that fermenting patriot gratuitously depicts for his countrymen, will despise their impetuous relative, and, at the same time, grow fat upon her poverty? Perhaps not. Perhaps the electro-motor will worthily replace the superannuated steam-engine; and the restless waves which ring our rocky coasts, the cascades which foam from our highland fells, will relieve us from the neces-

sity of filling the Yankee purse, and carrying the wherewithal to keep us warm, and turn our mills, and lighten our darkness, over two thousand miles of stormy sea. The electric light is now fairly equipped as a formidable rival of coal gas. For large works and public squares, where a few light centers suffice, it is in every way superior to gas, at a smaller cost; and if it could be distributed with less loss of energy and at smaller expense, it would speedily take the place of gas for street lighting also. It is certain to become a dangerous competitor against coal gas, and unless the latter is improved in quality and reduced in cost, its employment will by no means be so universal as it is at present.

The possible applications of electricity are, indeed, legion. Every day sees a new one. Its great mission is manifestly that of a vehicle of energy, and it appears to be capable of reproducing all modes of motion. If it is true that all the known forms of energy are mutually convertible, then electricity will probably be the practical channel of this transformation. We have seen during these latter years how magnetism, heat, and sound, can be transported into space by the electric current. In the future, near or remote, it will in all likelihood wing the shafts of light, and as men now hear by telegraph, so will they see. Nerve force is surely a form of physical energy, too; and with the fair prospect which we have before us, it is hardly too daring an imagination to anticipate the time when sensation itself may be transformed into electricity, and pain and pleasure sent by wire.—*Telegraphic Jour. al.*

A New Electrical System of Astronomy.

Electricity, when first discovered by Franklin, seemed a very useless and dangerous plaything to the people; so much so that he was obliged to reply to their taunts that it was of like use to that of a child; which is that "it may become a man." But doubtless even he had only a faint idea of the importance of his new plaything. It has been stated by some physicians that electricity is all life. Others do not go quite so far as this, but say that the vital force which runs the living organisms, if not electricity, is, at least, very like it. Dr. Kavanaugh, a Methodist minister living in Houston, Tex., is now endeavoring to establish the electrical system of astronomy. The theory holds that the sun is the great electrical power by which its own existence is maintained, the planets kept in motion, and so vitalized as to sustain and promote all vegetable and animal life. He argues that the sun is not, like the earth, a solid body, because in this case it could not emit light and heat, but only reflect it. The conclusion has been reached that the sun consists of a light, porous structure, in which there is free circulation of the elements necessary to the emission of the fluids which are thrown from its surface. The spots on the sun, formerly supposed to be breaks in its photosphere, are now known to be vast caverns, reaching far down into its central regions. These are declared to be nothing more than vast receptacles of static electricity. The unchangeable law of the revolution of planets, which has always been attributed to other causes, if definitely known at all, is by this theory accounted for more satisfactorily. The sun's electricity is positive, and that of the planets negative, and the planets are held in their orbits by the principle which causes the attraction and repulsion of bodies according to their electrical states.

The earth is attracted toward the sun in two points of its orbit, until it becomes sufficiently positive to be again repulsed to the elongation of its orbit. It is claimed that this theory alone can answer the question, whence does the sun draw its supplies to compensate for its never-ending distribution of light into space.

Two sets of investigators have been at work with this plaything of Franklin's since its discovery; the one might be called theoretical, and the other practical. The first promises to be behind no department of science in interest, and of great importance in deciding questions which have puzzled the heads of scientists and physicians of all ages.

The latter has been of great use to everybody, and is constantly working advancement which is astonishing. This class cannot be better represented than in the person of Mr. Edison. The last great electrical invention, called the telemachon, if all is true that is said of it, will make great changes in many branches of industry.

Hardly a Success.

Mr. Alexander McNaie writes to *Engineering* to state that by means of a Hughes microphone transmitter, with battery, a telephone, consisting merely of a frame, coil, and vibrating disc, and without any magnet or other piece of iron, will utter speech distinctly, and with moderate loudness.

Immediately after reading the communication of your correspondent "M" in regard to utilizing the phonograph for clerical purposes in telegraph offices, I determined to try the experiment, but as you will see, the results were not entirely satisfactory, and I nearly lost my position as a telegraph official. I am manager of an office in a hotel in this city, my "force" consists of myself and a clerk. Of course, with so large a number of employes, we were not liable to become "rushed," but having a reputation for prudence in the management of an office, I wished to preserve it by preparing for any emergency, and I determined that I would spare neither trouble nor expense in promoting the Company's interests. In fact, I would even apply my entire monthly stipend to that end were it necessary.

It occurred to me that if the phonograph experiment should prove a success, it might be the means of rendering me famous with the company, by being the first to notify our superintendent that he might reduce my force as I had hired a machine to attend to the counter, and that hereafter the services of a clerk could be dispensed with. With this object in view, I procured a phonograph at my own expense, and set it up. I did not "hire a boy for two dollars a year," as "M" had suggested, as that would be simply wasting money, but arranged the machine to run by clockwork, and connected it by electricity with my desk, so that I might be able to start it off myself at a moment's notice. I shouted into the machine a number of replies to questions that were likely to be asked, and everything was ready for business. I discharged the clerk, and placing myself in a chair with my back to the counter, laid back for customers. The first call was a policeman with a big book in his hand soliciting subscriptions for yellow fever sufferers. Says he:

"What are yees going to give me this morning?" Not fully understanding the nature of his visit, and with an eye to business, I turned on the phonograph, and it shouted lustily, "four dollars in gold," an answer intended for cable inquiries. Of course the policeman admired my liberality, but subsequent explanations nearly caused my arrest for obstructing the gentleman in brass buttons in the discharge of his duty.

My next customer was an old lady with little white curls all over her ears, and wearing a pious expression of countenance. She said, as she gazed upon the rear of my cranium, "Young man, how late do you keep open?" My machine promptly yelled, "I don't know, please inquire of the hotel clerk." Evidently under the impression that my memory became muddled after a certain hour, she walked away, indignantly, promising to report me to her friend "Norvin" for insolence.

A small boy was next on the list, and, at the moment, I was busy receiving a three hundred word D. H. message for a director who boards at the hotel. I heard the boy say, "What's de price ter"—I never break when I'm receiving, and couldn't think of it just then, so I touched off the machine, and it breathed softly, "twenty-five cents, sir." The boy laid the message and the money on the counter, and ran off. Subsequent investigation disclosed the fact that the message was going to San Francisco, and that the quarter was bad. During the remainder of the day I gave my personal attention to the tariff questions, and resorted to the phonograph for such questions as:

"Is this a telegraph office?" (office covered with signs.)

"If I send this half rate, will it be delivered to-day?"

"Do you keep postal cards?"

"How was that baseball game?" (game in every city.)

I was so busy that I could not always pay attention to the answers that the phonograph gave, but the pile of documents from the superintendent that lie before me go to prove that it behaved very badly all day. The clerk is now reinstated. V.

There are 79,000 miles of telegraph wire in the United States and 6,850 offices, or one mile of line to every thirty-six square miles of area. England has 75,000 miles of line and 5,600 offices, or one mile of line to every mile and a half of area.—*Electrician.*

An Operator Astonished.

An incident occurred at Hunter's Point last Thursday which shows that people often come across telegraphers, or ex-telegraphers, when least expected. There had been a collision between a passenger train and the paymaster's train of the L. I. R. R., near Fresh Pond, occasioned, it was reported, by the carelessness of the operators at the latter point.

To learn if possible the names of the persons injured, and also the latest details of the accident, a reporter called at the depot of the road, in Hunter's Point. There he found a couple of train men, but they knew, or professed to know, nothing of the accident. They suggested, however, that the telegraph operator at the headquarters might be able to give information. To the operator the reporter then went. He found him decidedly non-committal. He admitted that he had heard of an accident on the road, but of the particulars he knew nothing. Couldn't say whether it was near Fresh Pond or not; didn't know the name of the operator there; was unable to tell the time of the occurrence or whether the train had many passengers; had not heard of any one being injured; didn't know whether the trains had a conductor or not; couldn't say if the locomotives were damaged; was willing to admit, however, that the terminus of the road was Hunter's Point, otherwise known as Long Island City.

Finding that further questioning was useless the baffled seeker after news turned to take his departure when the click of the telegraph instrument caught his ear. Looking around he saw his late non-committal informant busy at the wire, while near by stood a fellow operator watching his motions with a broad smile illuminating his face. In former years the reporter had mastered the mysteries of the Morse alphabet, and he listened to ascertain the cause of the sudden levity. His ear soon caught the following from the instrument: "Say, Bill, that reporter didn't make much out of this crowd, did he? ha! ha!" The time for the reporter's revenge had come. Looking the Knight of the Key in the eye he said: "That's a fact; I didn't make much out of this crowd." In an instant the smiles had left the operators' faces. The shock of the discovery was too much. They looked meek and crestfallen, and in the stammering apology they attempted to make they failed ignominiously. Leaving them to ponder on the matter the reporter said "Good night" and took his departure.

Canadian Telegraphy.

Mr. E. Wiman, of Messrs. Dun, Barlow & Co., writes to a New York paper of the wonderful progress, completeness, and cheapness of the telegraphic system in Canada. Mr. Wiman is a particular friend of Mr. H. P. Dwight, the manager of the Montreal Company (answering in Canada to our Western Union, with which it affiliates in business), and is therefore supposed to speak by the book. He demonstrates that from the humble beginning of \$60,000 capital and 500 miles of wire in 1847, the concern has grown to \$1,925,000 capital and 20,000 miles of wire, accommodating a population of 4,000,000 people, with 1,400 offices, or an office to every 2,857 inhabitants, the stock paying almost uniformly 10 per cent. dividends per annum through its gradations of thirty years. Contrasted with the Western Union system of the United States, Mr. Wiman shows that for a population of 40,000,000 we have 267,000 miles of wire and 7,500 offices, or an office to every 5,333 inhabitants, and contrasted with Great Britain to a population of 32,000,000 that system has 113,000 miles of wire, and 5,375 offices or one to every 5,950 inhabitants. It is to the cheaper rates, which pay so profitably, of the Canada system that Mr. Wiman directs special attention. Its longest reach, from Sackville in the extreme maritime province to Sandwich on the Detroit straits, is 1,200 miles. The service is done for 25 cents for ten words, and 1 cent for every additional word. In the United States, taking New York and Mobile, also 1,200 miles, as an example, the charge is \$1 for ten words and 7 cents for each word additional. The Government rate in Great Britain is 25 cents for all distances ten words, and 6 cents for every five words additional, the extreme and average distances being, of course, far below the Canada system. The theory of Mr. Wiman is that the Western Union system is in no peril, in point of yielding good dividends, either from future competition or from the cheaper rates of business which the gradual increase of service will render practical and even desirable in active competition with the post office.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

October 15th, 1878.

Readers of THE OPERATOR should bear in mind that we are always happy to purchase for them anything that they may desire from New York, whether in the line of telegraphic or electrical goods or otherwise. Any telegraphic instrument or apparatus advertised in these columns, or manufactured in this country, will be forwarded on receipt of very lowest manufacturers' prices. Books, newspapers or magazines on any subject will be sent prepaid by mail on receipt of publisher's prices. We will thank readers if in future they will send all their orders, small or great, to us. We will guarantee them satisfaction.

A NEW advertisement of Mr. Alfred F. Moore will be found in this issue. Mr. Moore is the sole manufacturer of Nickerson's patent tip for flexible cords, which is a great improvement over anything of the kind we have hitherto seen, and will bear investigation.

A BOSTON correspondent in this issue speaks of the different arrangement of working wires in the New York and Boston offices. New York only works five wires from one battery, while Boston works any reasonable number. A discussion as to the relative merits of the two systems by the votaries of each might not be altogether unprofitable.

IN the Boston Notes in this issue reference is made to the case of one Nichols, who fills the position of night operator for the Western Union Company in that city, while he devotes his days to teaching in a so-called telegraph college. It seems that one Hellihan, whom we have already mentioned in this connection in these columns, has a "Telegraphic Institute" at 230 Washington Street, at which, by liberal advertising and rosy promises to the confiding, he is apparently doing a thriving business. He has printed contract forms for students, which, we are informed, seem to the casual reader to promise a great deal, but are so shrewdly drawn (doubtless by a lawyer) that they really promise nothing at all, and the student who has been swindled can make out no case of breach of contract. This Nichols, a teacher in the "Institute," was recently engaged as operator at the Western Union main office at a small salary, working nights and devoting his days to teaching at Hellihan's. The latter is using this appointment as an advertisement and indorsement, claiming to have procured the position for Nichols. Of course this is not so, and Manager Milliken probably has no idea of Nichols' connection with Hellihan's "Institute." It is not likely that Mr. Milliken will allow any action of his to be used by Hellihan as an advertisement or reference in victimizing unsuspecting young men and women, and we hope he will look into this matter and take such action in the premises as seem proper.

Economy that is Not Economy.

The Annual Report of the President of the Western Union Telegraph Company, a lengthy synopsis of which will be found in another part of this paper, shows the business of that company to be in a very satisfactory condition. A corporation whose receipts for one year are \$9,861,355.23, one-third of which, or \$3,551,542.70, is net profit, has no reason to complain of hard times. And it is not during the past year alone that the company has been thus prosperous, for during the twelve years from 1866 to 1878 its net profits have been no less than \$35,933,822.70, or an average of almost three million dollars a year.

The statistics of the mileage of lines and wires, number of offices and messages, receipts and expenses, average tolls per message and cost of transmission, with the annual increase in lines and wires, offices and messages for twelve years, which accompany the report, are very valuable and interesting reading, and show at a glance the wonderful progress of the company during that time.

Speaking of reductions of tariff, the President says that during the past year further reduction of tolls has been made to the public without reducing the average profit per message to the company, and adds that "it is confidently believed that the economies in expenditures now fairly inaugurated will be found to justify still further reductions in its average rate of tolls to the public, without reducing the average profit per message." This is a very excellent thing in its way, but, unfortunately, the "economies in expenditures" referred to have been principally made at the expense of the employé and of the service, and we very seriously question whether in the long run such "economies" pay.

The Western Union Company has practically changed hands. A new administration is in power, and old things, old times, and old employes are forgotten. What do the present men at the head of that corporation care though you have devoted your life thus far to the service of the company—though you have risen from messenger, and attained your present position solely by honesty, industry, and self-sacrificing devotion to duty? Nothing. A king has arisen who knew not Joseph, and doesn't want to know him. Such an acquaintanceship would hamper him in the great ambition of his life—reducing the expense of the company and increasing the receipts—and, lacking it, he can inaugurate reductions, issue orders, and do things that he otherwise would not have the heart to do.

The first idea that seems to take hold of a man who succeeds to the head of a concern like the Western Union is that there are innumerable little financial leaks which it is his duty immediately to stop, and his time is mainly devoted to showing how much more economical he can be in the administration of affairs than has been his predecessor. He has an idea, too, that unless he issues a large number of orders he may lay himself open to a charge of dereliction of duty.

This often-mistaken zeal generally results in: first, a poor supply of labor, the men of talent being forced to seek elsewhere for that recognition which his "economy" denies; secondly, an inferior class of goods, the manufacturer being cut down in his prices, can only afford to furnish supplies that are dear at any price; and thirdly, a clogging of the wheels of the great machinery by reason of so many "orders," which often-

times do not work very harmoniously together. We have seen much of this in the case of the Western Union. There are few first-class men in the employ of that company who are not anxious for an opportunity of leaving a business where intelligence, fidelity, and long and faithful service are so little appreciated; few of the supplies furnished by the Western Union are of first-class quality, and there is the further serious objection of not being enough of them, even such as they are. Said the manager of the Western Union office in a thriving county seat of 10,000 inhabitants to us recently: "Why, I was only sent three dozen pens and six lead pencils to last me six months! I never can use the same pen more than one day, and there are always three pencils in use at a time—one at the window, one I have, and one the boy carries."

"And what do you do when your supply runs out?"

"Just send the boy out for a two cent pencil, or two cents worth of pens, and scratch a word out of the message of the first customer that comes along!"

"Don't you think that that is rather risky?"

"It is, but I don't propose to pay for these things myself, and if the company cuts down my requisitions, and won't furnish me necessary supplies, I think I am justified in getting them the best way I can."

Those who are so zealously devoting their attention to "economies of expenditures" in the Western Union Company will find a vast amount of food for reflection in the above conversation. It is a humiliating spectacle to see the employes of so wealthy a corporation forced to such extremities to secure the supplies absolutely necessary to conduct the business of their offices, and the company that is so very extremely "economical," will find that it will eventually pay it to be a little more liberal.

This is our opinion, and we give it for what it is worth. The report shows the company to be in a very excellent financial condition, but there are many little details of this kind which might receive attention with advantage both to the company and the employes. Depend upon it "Too far East is West" in economy as well as in everything else, and there is a so-called economy that in the end is not economy.

A New Company and a Reduction of Rates.

After surmounting many obstacles, and experiencing no small amount of opposition and delay, the Continental Telegraph Company has at last opened for business, with, so far, six offices in New York, six in Philadelphia, and one in Trenton. The company has two wires to Philadelphia, and commenced October 14th the erection of two more to the same point. Wires to Baltimore and Washington will follow, and during the winter Boston is also to be brought into circuit.

The Continental Company's line is said to be the most substantially built telegraph line in this country. The company itself would need to be pretty substantial as well, for the great American would-be telegraph monopoly is making strenuous efforts to crush it. The Western Union has harassed the new company in every manner possible, going, it is said, to the men who were putting money into it, and threatening a ruinous cutting of rates whereby business would be handled at a loss, and even, it is further said, attempting to

dissuade the farmers along the route from permitting the line to be run on their land, on the ground of the risk they would run of being struck by lightning.

When the new company opened for business the A. & P., as a weapon in the hands of the Western Union, reduced its rates to Philadelphia to fifteen cents for ten words. Of course the Continental immediately did the same. On Monday, 14th, the A. & P. made a further reduction to ten cents for ten words, which the Continental will probably follow. Doubtless the A. & P. will next reduce the rate to five cents, and presently we may have the cheering spectacle of telegraph companies sending messages to Philadelphia free of charge, with a gorgeous chromo to the sender thrown in.

The Western Union rates have not been reduced, nor have those of the A. & P. except between offices near to where the Continental Company has offices. At these broker offices the A. & P. rates between New York and Philadelphia are ten cents for ten words, but from the main offices the rate is still twenty-five.

This is the same policy toward opposition companies that the Western Union has always displayed. Of course, the old company is wealthy and can afford to fight it out on that line considerably longer than can the Continental, and thus hopes to so ruin the latter that it will be glad to sell out at a sacrifice, to be added to the two hundred odd competing lines of which the present Western Union is made up. We hope, however, that the Continental will not be easily vanquished, but that, keeping just as quiet as it can while business is being handled at a loss, it may finally weather the storm, and at the end be all the stronger and all the more vigorous for the bitter opposition with which it is met at the outset. It probably costs about seventeen or eighteen cents to send a message to Philadelphia, delivery and all, though the officers of the new company seem to think that they can make it pay at fifteen. Now, at ten there is a loss of about seven cents on each message, so that the Continental should not make much of an effort toward securing business at such rates, but should rather keep the rate at fifteen, where it may in a measure pay, than lower it to ten, at which it cannot possibly pay, simply to be as low in its tariffs as is the A. & P. Even as between a ten cent rate by the A. & P. and a fifteen by the Continental, most business men would patronize the latter. A new merchant's line has recently been run from Chicago to Milwaukee, upon which the rate was reduced to ten cents, whereupon the Western Union reduced its rates to five, yet on one day the merchant's line transmitted between five and six hundred messages, while the Western Union only handled four or five.

The Telephone Suits.

The Bell Telephone Company has commenced suit in Cincinnati against C. E. Jones & Brother, and, on a preliminary hearing, the Court ordered an injunction to issue, unless the defendants gave bonds to respond to such damages as might be recovered against them. Such bond was subsequently given. In Boston suit has been commenced against one Hend, a maker of telephones. He was enjoined from the further manufacture of the instruments, and, on his continuing to solicit orders, the Court issued an order for him to show

cause why he should not be punished for contempt. In addition to the suits against the agent of the Gold and Stock Telegraph Company in Boston, a suit has been commenced against the Company in this city, and another suit against Jesse Bunnell for making and selling telephones. In addition to the Messrs. Dickerson, the Hon. Roscoe Conkling has also been retained as counsel for the Bell Company.

The Yellow Fever in the South.

It does not appear that the relentless fever is abating very much in the South. We hoped by this time to have been able to announce that the dread pestilence had about run its course, but late reports from the affected districts are not encouraging. The disease is spreading from the towns to the country, and unless frost speedily sets in, there is no telling where it will stop. On Saturday last, 12th, the number of new cases at New Orleans was 203, and the deaths reported 40, making a total, up to that time, of 11,409 cases in that city, and 3,440 deaths.

Since our last issue, the following telegraphers have died of the fever:

Sept. 28th, at Memphis, check boy John Foley.

September 29th, at Tangipahoa, Louisiana, operator William L. Fairchild.

Operator A. W. Harvey, who took Fairchild's place, died October 3d.

September 30th, at Grand Junction, Tennessee, C. G. Handy, a volunteer operator from New Albany, Indiana.

Oct. 1st, at Canton, Miss., operator A. Campbell.

Oct. 2d, at Martin, Tenn., manager T. J. Murphy.

October 3d, at Rossville, Tenn., manager, A. P. Graves.

October 3d, at Memphis, Tenn., operator J. R. Henrice.

October 4th, at Vicksburg, Mississippi, operator A. W. Dennett.

October 4th, at Water Valley, Mississippi, train dispatcher L. M. Pennington.

October 8th, at Nashville, Tennessee, operator and doctor O. D. Bartholomew, while on leave of absence and acting as a physician.

Oct. 11th, at Memphis, Tenn., operator Hawkins.

October 12th, at Osyka, Miss., operator R. Griffin Raoul.

The following have been stricken down since last issue:

October 1st, at Memphis, B. DeKlyn, volunteer operator from New York.

Oct. 2d, at Memphis, chief operator H. Sigler.

Oct. 2d, at New Orleans, operator W. D. West.

Oct. 2d, at New Orleans, messenger A. Theriot.

Oct. 3d, at Canton, Miss., operator W. E. Cross.

October 3d, at Water Valley, Miss., operator G. H. Lee.

Oct. 3d, at Martin, Tenn., operator J. T. Shull.

October 3d, at Way Bluff, Tennessee, operator Walter Ashton.

October 4th, at Jackson, Miss., manager A. L. Julianne.

Oct. 4th, at Tugaloo, Miss., repairer McNeill.

October 7th, at New Orleans, operator F. W. Gustine.

Oct. 9th, at New Orleans, operator B. F. Ober.

Oct. 11th, at Decatur, Alabama, Repairer J. V. Thompson.

Oct. 12th, at New Orleans, assistant chief C. L. Fisher.

October 13th, at Mamphis, operator W. A. Clark, who fled from Tuscombria.

Oct. 14th, at Mobile, Ala., Operators Taylor and Hernandez.

Oct. 14th, at Morgan City, Repairer Morgan.

At the time of going to press, the following were reported convalescent:

At Memphis, manager G. M. Baker; operators W. E. Mulford, C. T. Smithson, McReynolds (who was taken sick October 4th), and delivery clerk C. A. Gaston; others sick in that city doing well. Manager Baker has resumed duty.

At New Orleans, all those down are reported doing well.

At Vicksburg, Geo. Lennox, volunteer operator from St. Louis.

At Greenville, Mississippi, E. A. Dennett.

At Jackson, Mississippi, Manager Julianne improving slowly, and operator Doherty convalescent.

At Decatur, Repairer Thompson doing well.

There is only one well man at Jackson, Doherty, Julianne, McNeill, and the messenger being all down. Fresh men generally stand up but two days before they are taken sick. The family of manager Chrisholm, of Moffatt, Tennessee, are all down with the fever, and two of the children [of J. T. Alleyn, of New Orleans, are sick, besides one who died October 11th, and another which died on the 14th. The manager and all four operators fled from Chattanooga on the outbreak of the fever, and operators from this city had to be sent to take their places.

Christmas Evergreens.

The first article in the new book, which, as we before stated, consists altogether of poetry, is Longfellow's "Paul Revere's Ride," beautifully illustrated by six engravings. The second is "The Telegraph Wire," by Mr. George T. Lani-gan, a Canadian ex-operator now on the editorial staff of the New York *World*. This masterly poem—probably the finest telegraphic poem ever written—contains eleven illustrations, and is followed by Bryant's "Snow Shower," illustrated. Then there is Goldsmith's beautiful poem, "The Deserted Village," with six illustrations; "The Telephone," with three; a Christmas poem by Eliza Cook, illustrated, and a number of shorter telegraphic and general poems very carefully selected and illustrated. The ink used in printing "Christmas Evergreens" costs \$5 a pound, and is the best and most expensive ink manufactured. The paper will be thick, fine, and tinted, and the binding and other work in connection with the book of the very neatest and most tasteful character. In fact, we feel justified in believing that "Christmas Evergreens" will be the handsomest book ever issued from an American press at the price. Those who doubt it, have only, we think, to wait until they see the book to be convinced. It is expected that a very large number of copies will be sold, both in the profession and outside. We shall next issue announce the very liberal commissions to agents on this book.

MR. NORVIN GREEN, who has been acting President since the death of Mr. Orton, was elected President at the late annual election of the Western Union Telegraph Co., and Mr. Hamilton McK. Twombly First Vice-President. No other changes were made among the officers, except that of the promotion of Mr. John Van Horne to a Vice-Presidency, the latter a graceful compliment to a very deserving officer.

The Wonderful Agophone.

We mentioned in last issue of *THE OPERATOR* that a Mr. Jewett, a druggist of St. Omer, Ind., had perfected an instrument by which he claimed to be able, without the aid of electricity, carbon, or any complex machinery, to collect distinct sounds, and carry them to a great distance without loss of volume. The Cincinnati *Gazette*, speaking of the Agophone, says:

One of the defects of Edison's telephone, with its complexities of electric battery, disks, and mouth and ear tubes, is in its inability to receive other sounds than those uttered directly into the mouth-piece, or emit those carried with sufficient force to be heard again at a greater distance than an inch or two from the ear tube. This defect was partly remedied in the invention of the microphone, an instrument which magnifies sound. The whole is very complicated, however, and fails to reproduce sounds in their original strength of volume, or to receive sounds which are not especially directed against the disk of the receiving instrument.

It is not a little strange that the only important improvement upon the telephone, by which sounds uttered at large in a room can be gathered up, transmitted, and as loudly diffused again, should have been perfected in a country village by men who make no pretensions whatever as scientists. The professor takes the longest way around, and the schoolboy finds the shortest way home.

When the reporter entered the "curiosity shop" of the Messrs. Jewett, at St. Omer, Ind., he found a group of neighbors gathered in the store listening to a conversation between the elder Jewett in the store, and his wife at their residence on the hill, a quarter of a mile away. Mr. Jewett was leaning against the edge of the counter, three or four feet in front of a little instrument attached to the case of post-office boxes, and which seemed to be nothing more than a square wooden box, the front end open, and the rear connected with a fine wire running through the window. He spoke in a natural and easy tone, apparently directing his words to some other object than the instrument. The replies came back with such distinctness that they were understood equally as well in the furthest corner of the store as at the mouth of the instrument. Mr. Jewett then asked Mrs. Jewett to sing, and the words of the pretty hymn "Over There," filled the room. The only difference apparent between the tone as heard and the original was that it seemed to have been uttered in an adjoining room, through an open door. Mr. Jewett afterwards went up home, and by request of his son, took a seat about eight feet distant from the agophone, and played the "Arkansas Traveler" on his violin. Every note was distinctly heard on the street ten or fifteen feet in front of the drug store, and in the rear yard which was separated by another room from the drug store. Mrs. Jewett then played an air on an organ, standing back of the agophone eight or ten feet, and every note was heard by all in the drug store with equal distinctness. For a surprise to Mrs. Jewett she was asked to listen, and a lighted firecracker was placed in the box of the instrument. When it exploded the laughing of the inmates of the house was distinctly heard. "Did you hear anything?" was the query from the store. "I should think I did!" was the reply. "This isn't the Fourth of July!" A lazy boy was then sent up to the house with half a dozen firecrackers to experiment with there, and the lazy boy picked up another lazy boy on the way, and proceeded to the house. When they reached the house, the party in the drug store heard the door close upon them, the conversation between the three as to the purpose of the errand, the footsteps upon the floor as the boy proceeded to the instrument, and then the explosion, almost as loud as that occurring in the drug store. Then the character of the exhibition was changed, and Mrs. Jewett was heard sweeping the floor. A whispered conversation was then carried on, the speaker in the drug store standing about two feet in front of the instrument, and the replies were distinctly heard. A watch placed in the box was heard ticking at the other end. Other experiments show that sound was transmitted equally well when diffused through a number of terminal instruments.

An examination of the instrument itself revealed nothing to indicate its peculiar power to gather up sounds, carry and diffuse them. The receiver is a mere wooden box, about the size of a cigar box cut in two. The open front end is adorned with a narrow border of gilt frame, the sides are of black

walnut, the back of thin iron plate. About an inch forward of the iron plate, and filling up the sides of the box, is a disk or sounding board of white pine, with an opening about an inch in diameter in the center. From the center of this opening a small funnel of copper plate extends back through the sheet iron plate, and an inch or so beyond, where it receives and fits closely around a thin brass wire. About two yards of brass wire are used at either end of the line, the intermediate connection being of copper wire. Mr. Jewett calls this funnel—but improperly, it may be said—the "vibrator." If there be any vibrator about the agophone, it is probably the whole wire. There may be some secret, which the inventor is disposed to conceal, in the construction of the box, but it is more probable that the successful working is due more to the perfect conductive power of the combination of metals in the wires, and the radiating power of the box. Whatever it is the inventor will keep it to himself until the arrival, at least, of his letters patent. So far as experiments have gone, this agophone is a vast improvement upon the telephone. The only difference between its operation on the short, and that on the longer wire appeared to be that on the shorter the vibrations of sound were closer together, and, therefore, less distinct. On the longer wire they were more regular, and seemed to be transmitted with greater naturalness. The Messrs. Jewett are preparing to extend a line from their drug store down to St. Paul. This will give a better test than has been made so far, but the capacity of the instrument for transmitting sounds great distances without the aid of electricity remains to be proven.

Boston Notes.

Mr. Charles S. McCoy has returned to his home in St. Lawrence County, N. Y., after substituting in this office during the summer season. We regret to state that Mr. Warren E. Tice (the only ic) has been obliged to go to his home in Newburgh, N. Y., on account of sickness. Late advices speak favorably of his early recovery and return to duty. Mr. A. S. Bedwin, formerly manager of Duxbury, Mass., office, has accepted a position on the day force at 109 State Street. Mr. James C. Robinson has been transferred from the night force, 109 State Street, and appointed manager of Duxbury, Mass., office, the position made vacant by the resignation of Mr. Bedwin. Mr. Robinson leaves many friends in Boston office, who one and all congratulate him on his good fortune. Mr. Thomas F. Bishop of this office has accepted a position in Assistant General Superintendent Wood's office. Mr. Bishop will receive a goodly increase to his present salary, and will also take with him the well wishes of his friends "up stairs." Mr. John T. Stevens has been transferred from the day force to night duty, working Second Associated Press wire. Mr. J. B. Colson, being transferred from second press wire to the signal circuit, Mr. E. B. Pillsbury changes from the signal circuit to the eastern press wire. Mr. J. B. Phillips has been appointed to the French cable circuit, *vice* G. W. Dennett, transferred to No. 5 (A. & P.) north. Messrs. Grandy, Kelly, and Wilson have returned from their vacation, all looking fat and rosy. Mr. M. H. Bryant, late manager of the Portland, Maine, A & P. office, is filling the vacancy caused by the temporary absence of Mr. B. W. Winter, manager Old State House office, this city. Mr. W. L. Waugh, of the A & P., Buffalo, New York, has returned to that office, after "subbing" one month at 109 State Street for Mr. E. E. Morrison, of the Buffalo quad. Mr. O. L. Barron has been transferred from the day force to the split trick made vacant by the promotion of Mr. Phillips. He works four and nine north. Mr. M. W. Brown has returned from Martha's Vineyard, and is working extra at 109 State Street. Mr. H. E. Wyman is the night operator at the General Post Office building, this city. Mr. Gormley, of New York, has accepted a position on the N. Y. printers, *vice* C. B. Noyes, "wandered off." Mr. Tom Nichols, of New York, a graduate of Cooper Institute, is working on the night force, this office, for the munificent salary of forty dollars a month. But as Mr. Nichols has also accepted a position with Prof. Helliham, sole proprietor of the "Boston Telegraph College," (so called), we presume he labors for the Western Union merely to earn a little pocket money. Mr. Helliham pays his employes big wages (or agrees to), and it surprises us to see a man who can command such a position accept positions with a little concern like the Western Union Company.

U. S. M. T. Arizona Items.

Perhaps a few lines from this desert spot of Arizona may not come amiss. Sergt. W. H. Storey, he of the romantic "wedding by telegraph," an account of which was published in *THE OPERATOR* over two years ago, is here, and, by the way, has a charming blue-eyed daughter nearly two years of age. He is still manager of the U. S. Military Telegraph, with M. A. Cunningham as assistant. Mr. A. P. Venton is manager of the W. U. office here, located at the Southern Pacific Railroad Company's depot. The weather during the past summer has been unusually hot. The signal service records show the maximum thermometer record to be 118 degrees—very few days recording below 105 degrees. There was hardly a day when, at 9 P. M., it did not record above 95 degrees. How we lived through it all remains a mystery. The weather now, however, is delightfully cool, and a blanket over one at night very enjoyable. It was with pain and regret that I read of the death of Fred Moxon in New Orleans. We were old acquaintances in Norfolk and Washington. Lieut. C. A. Booth, Superintendent, is now on an inspecting tour on the Cala and Arizona Division U. S. Military Telegraph, and at this date is at Camp Grant office. To make a tour of inspection in this country usually takes two months, as there are no railroads, and all traveling is done by stage coach. The worst kind of vehicles are in use, and the route is infested with highwaymen, who are rarely captured, the Mexican border being so close to the Southern mail route. An operator coming from the Eastern States to this country is at first delighted, but in less than a month sighs for home. Those luxuries which at home cost a trifle, here cost a pocketbook full of money. Yet, strange to say, few who have lived in such a country ever leave it to stay. There seems to be some hidden charm about it that none can explain. General Sherman and General Fremont both passed through here a few days ago. The projected plan for a Telegrapher's Union is, I can assure you, heartily approved of by the Military Telegraph operators.

YUMA, ARIZONA, Sept. 29, 1878.

YEROTS.

Telephonic Alarm.

A new telephonic alarm, for attracting attention at distant stations of a telephonic circuit, has recently been designed. It is based upon the fact that when a voltaic current is either made or broken, a click is heard in a telephone. The instrument consists of a brass wheel centered to an upright bracket attached to a stand, capable of being rotated. Against the edge of this wheel, which is milled, a light metallic spring presses, so that when the wheel is turned a vibratory current is produced, both the spring and wheel being included in the circuit of a battery and telephone. In order to prevent the battery ever being left by mistake in connection with the telephone line, the instrument is provided with an ordinary electric bell-push or transmitting key, the connections of which are so arranged that the battery and wheel are cut out of the circuit unless the button is pressed as in the act of ringing an electric bell. In order to call attention to a distant station, all that is necessary, therefore, is to press down the button with the left hand, and give a turn to the wheel with the right. The advantage of this instrument is, that it dispenses with the use of a signal bell or any special signalling wire, the telephone itself being made the sounding apparatus. —*Manufacturer and Builder.*

How it Feels to be Struck by Lightning.

Rev. Dr. Bartol, of Boston, who came as near being struck by lightning as it was possible and escape, has written an account of the sensation. He says its suddenness beyond conception is the marked property. "It gives no time for fear, or even surprise, and the self-loss does not appreciably last. If the blow be not fatal, the restoration may be so quick that, in less than a minute's time, horses and cows and pigs and men, escaping or delivered; swarm together, under the flash and tempest, on the green-sward. A resistless weight, steaming and crowding through the frame, is the consciousness I chiefly remember, with the idea that I had been chosen as part of the lightning rod for a huge and incomputable discharge. The experience was, moreover, a single moment in wonder-land. All customs and institutions were abolished for a time. In such a passage as I was allowed to stand in for a moment, death becomes nothing and life is all, but a wakeful night and a week's headache were the result."

An English Opinion of Lightning Flashes and Sam Johnson.

"Lightning Flashes and Electric Dashes" is the rhythmical title of a contribution to telegraphic romance now well known on the other side of the Atlantic. We have been told by Mr. W. H. Preece how popular the telegraph service is in America, and the appearance of this book is pleasing evidence of the fact; for it is read not only by American operators (who, we must say, are fired by a praiseworthy zeal for their calling which is refreshing to see), but by the general public as well. It is always interesting to look over a literary novelty such as this, in order to discover if it contain any traces of true merit, any grains of gold among the dross; and we have been gratified in finding that our quest here was not in vain. * * * While upon this subject, we may mention that a new story, entitled "Sam Johnson; the Experience and Observations of a Railroad Telegraph Operator," by J. A. Clippinger, one of the contributors to "Lightning Flashes," is about to appear in America. The insight which writings of this kind give into telegraph life in America should render them of additional interest to the fraternity in England. The travels and experiences of an American operator, if written with spirit, power, and good taste, would "make a hit."—*Telegraphic Journal*.

How Many Wires Should be Worked from One Battery.

Mr. George B. Prescott, Jr., a rising young electrician, is on a visit to our city, accompanied by a number of cases of testing apparatus, including Thomson's Reflector and Bridge, Varley's Differential, Siemens's Universal, Phelps's Sine, Gaugain Multiplier, and ten Resistance Boxes. After presenting his credentials, Mr. Prescott stated that he had come to take observations, and intimated that Boston was considered the model office of the company as regards practical management of wires and batteries, while New York had a higher scientific standard. His object was to blend the good qualities of both. He found that in Boston any reasonable number of wires are worked out of one battery, regardless of the length or resistances, while at New York five wires from one battery is the maximum. This indicated great waste of battery at New York, and would receive attention. By this discovery of Mr. Prescott it is estimated that there will be a saving of many thousands of dollars in New York office alone.

NUMBER 33.

Boston, Mass., Sept. 7, 1878.

Mr. Edison and the Electric Light.

In conversation last week with a reporter, Mr. Edison, speaking of electric light, said: "I have let the other inventors get somewhat the start of me in this matter, because I have not given much attention to electric lights; but I believe I can catch up with them now. I have an idea that I can make the electric light available for all common uses, and supply it at a trifling cost compared with that of gas. There is no difficulty about dividing up the electric currents, and using small quantities at different points. The trouble is in finding a candle that will give a pleasant light, not too intense, which can be turned on or off as easily as gas. Such a candle cannot be made from carbon points, which waste away, and must be readjusted constantly while they do last. Some composition must be discovered which will be luminous when charged with electricity, and that will not waste away. A platinum wire gives a good light when a certain quantity of electricity is passed through it. If the current is made too strong, however, the wire will melt. I want to get something better. I have a chemist at work helping me to find the composition that will be made luminous by electricity. Now that I have a machine to make the electricity, I can experiment as much as I please. I think," he added, smiling, "there is where I can beat the other inventors, as I have so many facilities here for trying experiments." He added that he didn't care so much about making a fortune out of this matter as getting ahead of the "other fellows," and making something new.

"Dovey," he said, "I think I was telling you after I came home last night about the necessity of some retrenchment in our expenditures, was I not?" "Well, really, I've forgotten, John," she answered nonchalantly, "turn on the phonograph and see." He turned it on, and all it said was, "Whizzer, whizzer, mazzar (hic), mazzar, whizzer, mazzar."—*Andrews's Bazar*.

Echoes from 197.

Miss Tillie Hatley works the Brooklyn wire.

James H. Largay is subbing in the W. U. office, Providence, R. I.

Dennis Brown is quite a favorite with the ladies in the C. N. D. department.

"Senator" Ives has resigned and returned to his home in Seneca Falls, N. Y.

Denny Harmon has joined the night force, and manipulates the cable wire.

Miss Carrie Breier has been transferred from the Syracuse wire to the Boston quad.

Owing to ill-health B. C. Edwards has resigned. He goes to Florida at an early day.

Miss Nellie Lowell and Miss Annie Nicholls have returned after a three months' vacation.

Constance Cadiz has been transferred from Merchant's Hotel to the ladies' department.

Giles N. Howlett has returned from Brighton Beach. He looks well and still signs "Ho."

Cable operator J. W. McLaren, has resumed duty after a long vacation spent in the Province of Ontario.

Miss Emery has been quite ill for several days past. Her place on the Albany quadruplex is filled by Miss Hogan.

The Misses Short, Lederer, and Cary, have been transferred from the city wires to Nos. 6, 51, and 50, East, respectively.

Mr. Pattison, of the Chicago quadruplex, has been appointed chief operator in the Western Union office, Ogden, Utah.

The Saratoga quad has been closed for the season. Emma Ross has been transferred to the Oswego wire, and Carrie Whitehorn to the Syracuse quadruplex.

The tests on Mr. Craig's system of automatic telegraphy has been discontinued, and Electro-mechanical Electrician Theodore F. Taylor, has been assigned to a desk in the operating room for Morse duty.

At the time of the great strike, Typographical Union No. 6 advanced \$500 in support of the good cause; it is a stain on the escutcheon of American telegraphers that this money has never been refunded.

Mr. Gourley, of the Connecticut River telegraph office, at Saybrook Point, Conn., paid a visit to the office September 4th. Mechanical Engineer Morris showed him how the time ball was dropped, and imparted other scientific knowledge.

"A Grateful Parent" writes to this office to call attention to the valuable services rendered by an ex-member of the telegraphic profession, Mr. Robert Dale, during a recent panic in the public school, 327 West 47th street, in this city. It appears that Mr. Dale, who is an old English operator, and also an expert engineer, which latter business he now follows, noticed that something was wrong, and rushed into the school basement, supposing that the steam apparatus was out of order. Finding nothing wrong there, he immediately set to clearing the crowded stairways and pacifying the children, in which he admirably succeeded. "As the daily papers," adds our correspondent, in conclusion, "seem to give all the credit to the police, who, as usual, arrived on the scene too late, and as Mr. Dale never loses an opportunity of saying a good word for your paper and other publications, I think it only fair that he should receive a passing notice."

A few days ago the time ball at the top of the Western Union building had to be replaced by a new one. The workmen who went up to remove the old ball had no sooner begun their work when they suspended operations with surprising abruptness and unanimity. A colony of wasps had taken possession of the ball, and were quite unwilling to surrender their airy quarters. Indeed, it was with considerable difficulty that they were finally smoked out. The surprising feature of the affair was not so much the unwillingness of the wasps to surrender their home as their taking up with it in the first place. When in position for its noon fall the ball rests at the top of a pole, 255 feet above the sidewalk; and, at the tick of twelve, drops twenty feet. That the wasps should have borne with this daily disturbance of their dwelling place is proof of their tenacity of purpose, to say the least. Whether their persistence was due to practical wisdom or to inherent stupidity is a question for scientists to decide.

Themes for the Thoughtful.

Faint not; the miles to Heaven are but few and short.

Laziness is a premature death. To be in no action is not to live.

We should do good to an enemy and make him our friend.

Good will subdues its opposite, as water extinguishes fire.

It is not life to live for one's self alone. Let us help one another.

One should seek for others the happiness one desires for one's self.

The wisdom, the blessedness, come through loving, not through being loved.

Nothing can constitute good breeding that has not good nature for its foundation.

Our glorious aspirations, which give us life, grow torpid in the din of worldly bustle.

Interested benefits are so common that we need not be astonished if gratitude be rare.

If thou hidest thy treasure upon the earth, how canst thou expect to find it in Heaven?

Everybody seems to think himself a moral half-bushel to measure the world's frailties.

Minds of only moderate calibre ordinarily condemn everything that is beyond their range.

Society is a masked ball where everyone hides his real character and reveals it by hiding.

What we wish to do we think we can do, but when we do not wish a thing, it becomes impossible.

Affectation discovers sooner what one is than it makes known what one would fain appear to be.

Calumny and detraction are but sparks, which, if you do not blow them, will go out of themselves.

He who thinks too much of himself will be in danger of being forgotten by the rest of the world.

Good counsels observed are chains to grace which, neglected, prove halters to strangle undutiful children.

Things may be seen differently and differently shown, but actions are visible, though motives are secret.

Seek to converse in purity with your own pure mind and with God. The first and highest purity is that of the soul.

Give full measure when you measure, and weigh with a just balance. Expend not but according to the measure of your goods.

We should learn not to interpret duty by success. The opposition which assails us in the course of obedience is no evidence that we are mistaken.

Power is not always proportionate to the will. One should be consulted before the other, but the generality of men begin by willing and act afterward as they can.

Whatever comes out of despair, cannot bear the title of valor, which should be lifted up to such a height that, holding all things under itself, it should be able to maintain its greatness even in the midst of miseries.

Beautiful souls often get into plain bodies, but they cannot be hidden and have a power all their own, the greater for the unconsciousness or the humility which gives it grace.

Have you known how to compose your manners? You have done a great deal more than he who has composed books. Have you known how to take repose? You have done more than he who has taken cities and empires.

Some are born for friendship, to whom the cultivation of it is necessity, as the making of honey is to bees. Do not let them suffer as for the sweets they would gather, but do not think to live upon those sweets. Our corrupted state requires robust food, or it must grow more and more unsound.

Friendship is a vase which, when flawed by heat, violence, or accident, may as well be broken at once; it can never be trusted after. The more graceful and ornamental it was, the more clearly do we discern the hopelessness of restoring it to its former state. Coarse stones, if they are fractured, may be cemented again; precious ones never.

Dashes Here and There.

The form of sounder devised by Mr. Elsha Gray, of Chicago, has been adopted for use by the British Postal Telegraph Department.

The telephone is to be fairly tried for military out-post work during the forthcoming autumn manoeuvres of the German and French armies.

When Edison brings that new electric light into use, the fellow who goes to a party with a patch on the knee of his pants, must come out of that dark corner and be exposed.—*Detroit Free Press*.

M. Trouvé, the noted French electrician, has invented an ingenious apparatus called the polyscope, for lighting up cavities in the human body, the interior of mines, powder mills, deep waters, and the like.

The time will come when you won't have to leave the theatre between acts to go out and "see a man." Edison is experimenting on waves of light sent through the telephone, and says that "before a year I will make you see a man a thousand miles away."—*Cincinnati Saturday Night*.

A VERY GOOD REASON.—"Why does lightning so rarely strike twice in the same place?" Prof. Wortman asked the new boy in the class in natural philosophy. "Huh," said the new boy, "it never needs to." And it is a little singular that nobody has thought of that reason before.—*Hawkeye*.

The new Government line from Bismarck, D. T., to Deadwood, via Forts Buford and Keogh, about 800 miles, has been commenced at both ends. There are now 75 miles built from Bismarck to Forts Stevenson and Berthold, and work will be commenced from Deadwood on Monday, Oct. 7th. There will also be a branch line built from Fort Keogh to Fort Custer, 75 miles. W. G. Wilkie, an old timer, accompanies the line as operator.

The *Detroit Free Press*, replying to a correspondent, states the matter very clearly when it says:

"We know nothing about the so-called telegraphic institute you name. We have noticed that such 'institutes' advertise that they will secure situations for all telegraph operators graduating from them, but we never knew that they had influence to secure a single situation for any one. Perhaps they have, though. It may be that they own a telegraph line themselves."

Scarcely has the Raccoon of Swat been laid among his fathers before the Ameer of Afghanistan appears to test the Atlantic cable with his ill-timed performances; and this, too, while Gen. Philippovich is bombarding the Bosnians at Senkovic, and Janovich is whooping them up at Kiobuk. Some idea of the terrors of a British shindy on the Punjab border may be gathered from the fact that such names as Barrookullen, Ghuznee, Koonagoorum, Mootakhala, and Muzufarabad are likely to be actively involved day after day.—*Baltimore Gaster*.

Car lighting is a problem which occupies the minds of inventors as well as the railway authorities. The "dim, religious light" of candles is just about enough to show how gloomy a car can be at night. Oil lamps in cars have been rather at a discount since the terrible accident which they caused on a Canadian railroad some years ago. The *Railway Age* suggests that a small machine be attached to a locomotive, and run by steam from the boiler, which will generate electricity enough to light every passenger car to the brilliancy of day. The plan should please the train men, as their work would only be the easy and simple connecting of a wire or two when the car was coupled on.

In an interesting case recently tried in Edinburgh, Scotland, the plaintiff claimed \$2,500 damages from the defendant, Mr. Joseph Agnew, a surgeon-dentist of Glasgow, for injuries incurred by magnetic trances to which the defendant was in the habit of subjecting him. The experiments consisted in placing large magnets in front of, behind, and above the plaintiff's head, the magnets being connected to the head by magnetic chains. During these experiments, which were undertaken in secrecy, at the defendant's request, the plaintiff's mind became seriously affected, and after repeated seizures, he became insane, at the same time losing his physical health as well. The plaintiff was the office boy of the defendant. The defendant stated that he was interested in the subject of magnetic sleep, and had tried the experiment, but without effect. The case had not been concluded at last accounts.

At a recent meeting of the Electrical Society of the Ohio Valley, Dr. L. R. Langworth lectured upon the microphone. The doctor was supplied with a full set of the instruments, and in the course of his remarks called attention to reports that had been circulated as to the capabilities of the microphone to render audible sounds that have heretofore been inaudible to the human ear. The doctor disputed the correctness of these reports, claiming that the ear, under similar circumstances, is almost, if not quite, as sensitive to faint sounds as the microphone. But under other conditions the microphone had the advantage, and was of great assistance to the unaided ear. It has been expected that the microphone would prove of great value to the medical profession in the auscultations of the lungs and heart, and in other examinations of that nature. This expectation, the doctor said, had not been fulfilled in his experimental researches with the instrument. It may be well to say that the Doctor's instruments were home-made, and while the principles upon which they were constructed are doubtless correct, it is a question whether the capabilities of the invention are generally over-estimated.

A correspondent of the *Hong Kong Daily Press*, writes from Taiwan on the 29th of June: "On the 20th inst., a novel and interesting experiment was tried in Taiwan-foo, for the first time in the history of Formosa. The human voice was transmitted by the telephone a distance of over thirty miles. Through the courtesy of his Excellency the Taotai, two telephonic instruments, the property of a member of the community, were connected with the government telegraph wires that run between Taiwan-foo and Takow. The first experiment was made on the line between Taiwan-foo and Anping, a distance of about four miles. Messages were transmitted, to which answers were received, without difficulty or interruption. Later on in the day messages were exchanged with Takow, distant thirty miles from Taiwan-foo; and although external sounds, such as the humming of insects and the general stir and movement in the city, with possibly some defective connection of the instruments, prevented a perfect transmission of every intonation of the voice, conversation of a more or less complete character was carried on between the two places, in the presence of the Taotai, for a space of over an hour. His Excellency expressed great interest in the telephone."

THE TELEGRAPH IN JAPAN.—With the opening of a new Central telegraph office at Tokio, Japan has undertaken the task of conducting hereafter the foreign telegraph business of that country. It is less than eight years since the first telegraph in Japan was erected, and there are now nearly six thousand miles of wire in operation. And, what is more remarkable, probably, is that the whole of the Morse instruments in the new head office, as well as the switch and a "cronofer," or time transmitter, by which the correct time is transmitted daily to the one hundred and twenty-five offices in Japan, are of native make. In fact, it is stated that wire is the only part of the telegraph system which is now imported, and it is expected that even the wire may soon be manufactured. When the new office at Tokio was thrown open to public inspection, before being used for business, the building was inconveniently crowded by multitudes of the lower orders of Japanese, who seemed "unwearied in displaying their open-mouthed enjoyment and surprise at the novel spectacle presented to them," and to look with delighted awe on the small and simple-looking instruments which they knew would in some mysterious way convey a message instantaneously to places far distant. The introduction and development of the telegraph in Japan is due to Edward Gilbert, the English Chief Superintendent.—*London Electrician*.

PERSONALS.

Edison's yearly income from his patents is said to be about sixty thousand dollars.

The many friends of Dr. M. S. Bacon, formerly an operator in the St. Louis W. U. office, will be pleased to learn that he is practising medicine and running a fine drug store at Lead City, D. T., and doing well.

Mr. W. K. Applebaugh, recently with the Bell Telephone Company, is now engaged in putting up private lines, burglar alarms, call bells, telephones, etc., with headquarters at 203 Broadway.

M. Coperg, Director of the French Postal Telegraph Department, proposes to tax each commune receiving weather reports twenty dollars a year. Much dissatisfaction is expressed, and it is thought the matter will not be insisted upon.

Mr. Eugene F. Phillips, of Providence, R. I., has been granted a patent for telephonic conductors; Mr. A. B. Lyman, of Cleveland, Ohio, has obtained one for annunciators; A. W. Gray, of Cardington, O., has patented a system of district alarm telegraph, and C. E. Carmon, of Lyons, O., a telephone resonator.

Mr. Hollingshead, who has introduced the Lontin electric light into London, first wanted to use Jablockhoff's electric candle, but, according to the *London World*, the latter demanded \$1,750,000 for his English patents. Mr. Hollingshead, not having that much money handy, adopted the less expensive Lontin light, which he nightly exhibits at the Gaiety Theater.

ST. PAUL, MINN.—Mr. W. C. Albee, night train dispatcher St. P. & P. R. R., has been appointed train dispatcher for the R. R. & M. Ry., with headquarters at Breckenridge. He is succeeded by Mr. E. A. Chantler, operator at Minneapolis. Mr. John Styles, assistant train dispatcher, takes Mr. Chantler's place, while Mr. F. Harrigan succeeds Styles. James Izoe, of Breckenridge, has been transferred to the Benson office, his successor being Mr. W. Simister.

Mr. W. R. Plum, who has for some time been engaged on the history of the U. S. military telegraphs during the late war, has issued a circular soliciting information concerning the operations of the Confederate telegraphs during the same period, a history of which he intends including in his forthcoming book. He says he already has much interesting and important matter in reference to the C. S. A. telegraphs, and we hope those in a position to furnish additional items, experience, and observation concerning that service, will not fail to do so. Mr. Plum's address is 208 La Salle Street, Chicago, Ill.

Hugh A. Campbell, who was on his way to Custer City, D. T. for the C. and B. H. Tel. Co., and riding on the "Treasure Coach," was shot and instantly killed, Sept. 26. The coach was attacked by five road agents, and some \$25,000 in gold bullion, besides currency and jewelry, taken. Mr. Campbell was, until about two years ago, a sergeant in the 8d Cavalry. When discharged he entered the service of the C. and B. H. Tel. Co. at Hat Creek, Wyo., where he remained until a few months ago, when he engaged in mining business at Lead City, D. T. He was a Scotchman, a Mason, and about thirty seven years of age.

Mr. Richard Ring died suddenly at Baltimore, September 18, from the effects of a chill. He was taken sick on the night of the 17th while on duty, but remained at his post until regularly relieved in the morning. He then went home complaining of the fever incident to the chill, but did not appear to be seriously ill; yet twenty minutes afterward he was dead. The deceased, who leaves many warm friends behind, rose from messenger to manager, and at the time of his death was in the employ of the B. and P. R. R. The operators on the road, and also on the N. C. R. W. and A. & F. R. R., held a meeting, and passed suitable resolutions of respect for his memory. The floral offerings at the funeral were many and appropriate. The deceased was twenty-two years and twelve days old.

MARRIAGES.

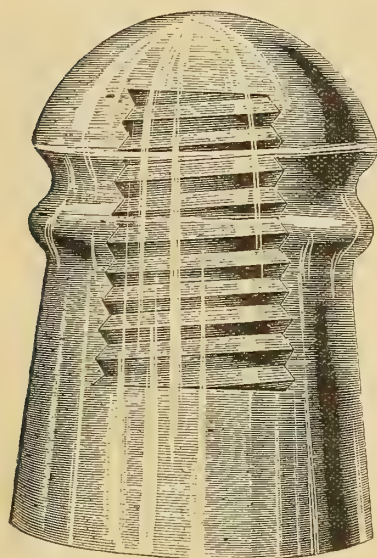
NEWHART—BERLIN.—Sept. 26th, at the residence of the bride's parents, Berlinsville, Pa., by the Rev. L. K. Derr, Slatington, Pa., Mr. A. F. Newhart, manager W. U. Telegraph Co., and agent and operator L. and S. division C. R. R. of N. J., Walnutport, Pa., to Miss Mary C. Berlin, of Berlinsville, Pa. No cards.

CHASE—PLATT.—Sept. 30th, at Central City, Nebraska, by Rev. Mr. Fitch, Mr. D. C. Chase, of Wyoming Territory, to Miss Mollie Platt, of Lynn, Indiana. The high contracting parties, after spending a month at various points of interest along the Pacific railroads, will return to Miser Station, on the U. P. R. R., where Mr. Chase will again resume his duties as agent and operator.

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Original and unique, humorous and pathetic.—*Augusta Chronicle*.
Short, realistic, lively sketches, illustrative of his own profession.—*N. Y. Tribune*.

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THE OPERATOR

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Deacon Babbitt's Phonograph.

Deacon Babbitt was progressive and enlightened in his ways;
He perused the *Science Monthly* and *Reviews* on rainy days;
Had a cabinet of fossils, and some birds securely stuffed,
In his wood-house chamber-study, where his pipe was daily puffed,

It would make an old-time farmer stare around as in a dream
To see the Deacon churn and plow, and cut his hay by steam;

Pitch his hay and thresh his barley with machinery alone,
And call his help to dinner with a patent telephone.

Thus the Deacon bought each patent that could work,
Or walk, or sing,
'Till he heard the papers raving of the very latest thing:

A machine to bottle language, or a song, a sigh, or laugh;
Then the Deacon he got crazy to possess a phonograph.

"Why," said he, "jest think of storin' up for a future generation
A prayer meetin' or conference, 'twould be their sure salvation;

Or good old hymns; these modern ones are jest as right as chaff.

Thur's no use talkin', I must have a patent phonograph.

And no one knows how much it cost—the Deacon had his way—

And on his study table stood the phonograph one day.
The Deacon loaded it with hymns and pious odds and ends.

Then donned his hat and sought the street to call in sundry friends.

THE BOYS INTERVIEW IT.

Jehonidab, the eldest son, had sought his Brother Green,
And they called in the hired man to view the new machine;



They danced and sung and turned the crank with uncouth song and laugh,
Not knowing of the mystic powers of that same phonograph.

They could not tell the purpose of the tinfoil on the drum;
They threatened angrily to kick the thing to kingdom come.
"It cannot dig, or plant, or sew, or do a single thing."
Then they had a war dance around the room that made the study ring.

THE DEACON RETURNETH.

The Deacon found the Elder with the work before him spread.
But he made him leave his sermon at the forty-second head.
And down the street, his smoking-cap disported in the wind,
His funny figured morning gown spread gayly out behind.

Together they sought Deacon Smooth, a man of solid sense,
Conservative in politics, religion and expense;
Just the opposite to Babbitt, he stuck to good old ways,
And laughed at all inventions of these evil modern days.

But Deacon Babbitt walked erect with triumph in his eye.
"He would show 'em an invention that would make all skeptics fly;"
And he told them he had bottled good old "China" and "Milbank."
And he guessed they'd stop their laughin' when they heard him turn the crank.

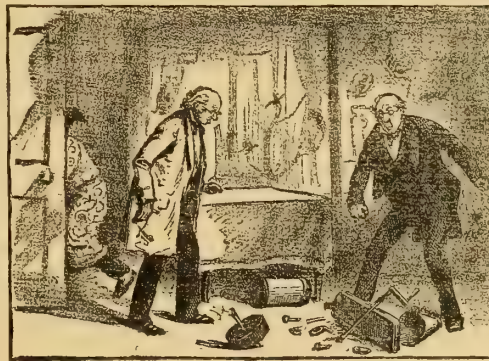
On the table in the study all so simple and serene,
Stood the very unpretentious, but remarkable machine,
Then the Deacon he explained to them the diaphragm and drum;
Grasped the handle, saying proudly: "Jest you lark to what's to come."

"I wonder what the durned old hog has been a buyin' now?"

The Deacon dropped the handle, while the sweat stood on his brow.

"The thing is out of kilter, but I guess I'll try agin."

"O, Keiser, don't you want a dog?" and "Betsey likes her gin."



The Elder donned his smoking-cap and started for the door,

But Deacon Smooth winked slyly, saying he would like some more;

But Babbitt gazed on the machine with looks of dark despair,

Then said he guessed he'd try again; he knew his hymns were there.

He grasped the handle firmly, caring nothing for the noise

Of half a dozen dancing fiends with voices like his boys,
Or shouted songs in melting tones of "I'm your darling Jane."

And "Whoop it up, my hearty boys," "Farewell to Mary Blaine."

But Deacon Smooth had stood it all conservative and grand,

Until the war-dance came along, and then he raised his hand

And smote the phonograph a blow that laid it on the floor,

A mass of wheels and broken springs, a thing of life no more.

The Elder ran down stairs, his fingers in his ears,
Repeating Scripture to himself to quell his rising fears,
And saying mildly to himself: "When man deserts his sphere
And penetrates to hidden things, he'd better stand in fear."

But Deacon Babbitt, good old man, will raise his head no more.

He sits and gazes sadly at the wreck upon the floor,
And tries to understand in vain (without an explanation)

How some way in the management he lost the combination,

The boys at noon were curious about the new machine,
But the Deacon told them to "Shut up!" with such a wrathful mien,
That not a word leaked out about the fatal morning's spree,
And Deacon Smooth, conservative, has scored a victory.
REV. A. T. WORDEN.

Helen's Interview with an Old Timer.

I told you in my last of the superintendent I met at the Telegraphers' Retreat, and shall now speak of an old-time operator with whom I had a very interesting conversation at the same place.
"This," said Dr. Thatcher, pointing to a thin, wiry little man, of apparently about forty years of age, with a sad, sweet smile on his pale face, "is a veritable old-timer. He is a Southern operator, and tells many wonderful stories of telegraphic life in the Sunny South in the halcyon days before the war, and some exciting ones of scenes during and since that event."

Being introduced, the old-timer remarked with a sigh that the business was not what it used to be. "I remember," he continued, "when there was no red tape; when each operator was held personally responsible for what he did; when there was scarcely such a thing as pay-day—if you wanted any money in those days all you had to do was to take it, and leave a due-bill in the drawer—and when mutual confidence and good feeling existed between operators, and between operators and officers."

"I worked for the Southern Telegraph Company before the war, and was a member of the Southern Telegraphers' Association. When the Southern Company opposed the Association, and a strike followed, the Southwestern boys, though not themselves interested in the strike, aided us in every manner possible. The strike was a failure, however."

"I remember some fast operators in the South. Jo. Fisher, of Nashville, once sent 55 words in a minute to Jimmy Leonard at Louisville, and at the rate of 52 words a minute for five minutes. They were both Southwestern operators. Leonard was the finest receiver I have ever seen. He died, poor fellow, at Columbus, Miss., in '63. You have heard of the fast sending contest of '66? A number of the best New York and New England operators each sent 250 words one night on the American Company's line, the time of each being—I have it right here:

Plum, of New Haven, 6 minutes, 10 seconds.

Burns, of Worcester, 6 minutes, 11 seconds.

Kettles, of Fall River, 6 minutes, 15 seconds.

Shetler, of Boston, 6 minutes, 51 seconds.

Gentry, of New York, 7 minutes, 3 seconds.

Phillips, of Providence, 8 minutes, 1 second.

"The writing of Kettles, the youngest man in the party, then only eighteen, though not the most rapid, was considered by the judges to be plainer and better punctuated than the rest, and he was awarded the champion gold key. Gentry afterward challenged Kettles, but was beaten 42 words a minute to 37½. Subsequently Burns challenged Kettles and beat him, sending 250 words in the remarkably short space of five minutes and forty-one seconds. Burns belonged to Fishkill Landing, on the Hudson, and died there afterward of consumption, retaining the championship for fast sending, for which he had a national reputation. Stanford, of Boston, had a contest with Kettles a few years ago, which you may remember. On this occasion Kettles sent the almost incredible number of 57.5 words a minute for an hour."

"I suppose you have seen some pretty large feats of telegraphing—I mean large piles of business transmitted at one time," I ventured to suggest as he paused.

"Well," he replied, "on the night of the day of Lincoln's funeral the wires were perhaps kept busier than they ever had been before. The amount of business transmitted between Washington and New York was unprecedented in the annals of telegraphy. The American telegraph office in Washington transmitted over eight wires,

and a portion of the time nine, 75,000 words of press report, 70,000 of it between 7 P. M. and 12.30 A. M.—being an average of 12,000 words an hour—in addition to an unusual number of private commercial messages. On the same night the United States line also transmitted about 10,000 words, making a total of 85,000 words sent to the press of the country in one day from Washington alone, at an expense, it was said at the time, of about three thousand dollars."

"Of course you knew a great many old-time operators of whose wonderful exploits we hear from time to time."

"Oh, yes, I have known a large number of telegraph men. You have heard of Saville, who died three or four years ago at Shreveport. Alf was one of the nicest men and one of the best operators you ever saw. He was attached to the command of General Morgan during the late war, and used the wires to the best advantage for the purpose of throwing large forces of Federal cavalry off the scent, directing them to the right and left, and opening their lines for the dashing Morgan to sweep through in quest of men and horses. Once he took possession of the wires between Nashville and a body of Federals operating in Southern Kentucky, giving peremptory orders not to send any more troops, but plenty of provisions and ammunition. The operator then in charge at Nashville happened to be an old friend, and recognizing Saville's sending, replied good humoredly: 'Get out, Saville, or I'll send the cavalry after you.' Saville volunteered his services at Shreveport after every resident operator had been stricken down, and died at his post. He now rests under a little mound covered with sweet wild clover, above which bends a majestic tree, whose branches, swaying in the breeze, sigh and moan an endless requiem for the honored dead."

"I was well acquainted, too, with D. Brainard Lathrop, the first operator killed during the war. He joined the army in 1861, as telegraph operator, and was mortally wounded entering Yorktown, Va., after its evacuation. He died that afternoon, and is buried at Springfield, Ohio, his home."

"Did you ever hear of Johnny Gregg? He used to be at Chattanooga. Johnny made one of the worst bulls that I think I have ever heard of. The name was Kozyanowsky, but Johnny got it, 'Col. of the 10th Ky. Cavalry.' Poor fellow, he never heard the end of that till he died."

Here he paused a moment, and seemed to be in so deep thought that I hadn't the heart to interrupt him with another question. When he spoke again his voice was wonderfully soft and mellow, almost sad, as he remarked:

"This conversation has recalled many an almost forgotten scene, some of them bright and pleasant, and others not so pleasant."

Then he looked at me very steadily for a few moments, and at last said, in a tone so earnest and tender that I felt almost frightened:

"I once loved a young girl as bright and buoyant as you are, and, somehow, your visit to-day has recalled those dead and gone days when she and I were children together."

"Oh, do tell me about her," I almost pleaded, for I was becoming very much interested in my new-found acquaintance, and instinctively felt that he had a history, if he chose to tell it.

"Her name was Alice Marston," he began, slowly. "We were children together, and although she was a few years my senior, we attended the same school, and were constant playmates all through the pleasant, careless, happy years of childhood."

"She was a very sensible girl, which is more than can be said of myself at the same period. Not content with the quiet happiness of my village home, I longed to go out into the great world and battle for wealth and fame and distinction. Ambition was my hobby, and my only dream was of a time when I could command untold wealth, be courted and flattered, and have my name upon everybody's lips. Then I should come back and marry Alice, and, I doubted not, live very happily ever after."

"I learned telegraphy, and secured a position in one of the larger cities. Up to that time there

had been no formal declaration of love between us, though it was no secret, I think, either to ourselves or to those who knew us that we thought a great deal of each other. In the first letter that Alice sent me was inclosed this almost prophetic poem"—producing from an inside pocket a carefully-folded sheet of paper on which was written, in a neat, lady-like hand, the following:

FORESHADOWING.

I know, my friend,
We never have been lovers, but when we
Of these sweet summer hours shall find the end,
And there shall be
A courteous close to all our pleasant speech—
When you go out into the hurrying crowd,
To battle like a warrior iron-browed
For all the worldly blessings which you claim,
Wealth, power, and fame—
Things which I do not crave and cannot reach—
I wonder if your heart will be the same,
Will beat as even and tranquilly
Away from me?
If, when you find your separate life once more,
'Twill be as whole and happy as before?
It may be so—
Ambition has broad leaves, which overgrow
The feeble heart-plants, blooming small and low;
And yet, I think
When time, or change, or both, have snapped the link
Which holds us ne'er so lightly heart to heart,
When you have found out new and pleasant ways
From these apart—
Have loved fair women, and have known great men,
Perhaps grown great yourself, and tasted praise;
Despite the rosy ties which bind you then—
You will look back to these tame quiet days
With dim, strange pain—
And haply in your dreaming think of me
Half mournfully,
Saying—while all surrounding witcheries
Seem dull and vain,
And beauty's smile, and flattery's ministries,
Lose, for the time, their hold on heart and brain—
'Ah, me! how little she was like to these!
Would I could look upon that face again."

"Leaving telegraphy after a time, I went into the cotton business, and, owing to a number of lucky speculations, was soon able to deal very extensively in that product. If I did not achieve fame or distinction, I at least made money, and that, in a measure, satisfied me. For two years, so engrossed was I with other things, I did not visit Alice, nor did I even write to her. One day I received a paper containing a notice of her marriage. This took me completely by surprise, and I found it difficult to realize that while my attention had been devoted to other and really less important matters, I had carelessly allowed the principal prize for which I strove to slip through my fingers, for I loved the girl to distraction, although I was hardly myself aware of it. Soon after that—for misfortunes, you know, rarely come singly—my business became unremunerative, and I was forced to go back to telegraphing, where, indeed, I was more at home, if less wealthy than I had been while in business for myself."

"I have tried to forget Alice," he added, with a sigh, "but, while I might be partially successful in that, I can never quite forgive myself for letting my foolish ambition run away with my better judgment, as I have done. The whole matter often comes back to me now as a strange dream, in which I live over again all the pleasanter portions of our innocent love-making."

Here he produced, from the same pocket as he did the other poem, a sheet of paper on which was written in a bold, manly hand, but not so neatly as the other, the words:

In the pleasant summer weather
We wandered on together,
By the silver-singing river and low-lying meadow land.
When our love had newly thrilled us,
And its rapture newly filled us,
And we questioned not, nor doubted, two children hand
in hand.
For us the birds were singing,
For us the winds were bringing
Sweet scents from wraith-like lilies that blossomed in
the pond;
And the blue sky seemed to love us,
And the roses bent above us,
Laying fresh, red lips together, like lovers overfond.
Sometimes, when twilight lingers,
And the rain, with phantom fingers,
Comes softly tapping at my window, where I sit alone,
I put off my outward seeming,
And in happy, boyish dreaming,
I seem again to clasp her, and again she seems my own."

I feel her dear arms twining,
I see her fond eyes shining,
And I press again the smiling of her tender, rose-red
mouth:
And the star of love is o'er us,
All the happy years before us,
And there is nought but melody and breezes from the
south.

But ah! the bitter waking,
The hopeless, weary aching
For the love that unforgotten can never more be mine.
It vanished like a shadow
Of a bird's wing on the meadow,
And I linger still, awaiting God's long appointed sign.

"However," he said earnestly, after a pause, "this troublesome and far-from-satisfying life will not last forever, and, as somebody has beautifully expressed it:

"Beyond life's toils and cares,
Its hopes and joys, its weariness and sorrow,
Its sleepless nights, its days of smiles and tears,
Will be a long sweet life, unmarked by years,
One bright, unending morrow!
Beyond life's troubled stream,
Beyond the chilling waves of death's dark river,
Beyond life's lowering clouds and fitful gleams,
Its dark realities and brighter dreams,
A beautiful forever."

HELEN.

Christmas Evergreens.

"Of making many books," saith the Scriptures, "there is no end," and it might fitly be added that the inclination to make books of poetry is as nothing compared with the prevailing penchant for collecting miscellaneous poems, and presenting them in tasteful volumes—making pomegrants, as it were, in which roses, geranium, heliotrope, violets, *et cetera*, are so tantalizingly combined, that weak humanity loses no time in opening its purse and purchasing. These books of verse are always cheerful friends to have about us, and though no one has ever succeeded in fashioning a bouquet of this character which did not possess some specimens that we should have been content to do without, very few indeed of the "Gems of Song," "Pearls and Gold," etc., which have issued from the press by hundreds, but have grown upon us with acquaintance, and become the most highly valued of all those voiceless yet eloquent preachers which always entertain us, and which have the decided advantage over our mortal friends that they can at any moment be shut up without fear of their taking umbrage at our moods and whims.

In "Christmas Evergreens," Mr. Johnston, it seems to me, has chosen with more than the usual taste which obtains with his contemporaries, and this, his latest claimant for popular favor, has perhaps more numerous features calculated to challenge attention than any book yet issued by him. While, here and there, something of a telegraphic nature, appropriately adorned with well-conceived and admirably executed engravings, has been introduced, thereby lending an aroma which gives the book a peculiar value to telegraphers, the most conspicuous selections are taken from the rich and abundant treasury of two men born in different countries, living in different ages, and who represent entirely diverse schools of English poetry—two men whose lives, associations, general tendencies and literary products are as dissimilar as they are excellent. Of Mr. Longfellow's "Paul Revere's Ride" it is not necessary to say much. The majority of us who have now grown to man's estate made its acquaintance a long time ago, and not many of us will soon forget it. It is peculiarly gratifying to have it and Goldsmith's "Deserted Village" bound in the same volume with the less ambitious efforts of members of our own guild. It would be presumptuous for me, however strongly my inclinations may urge me, to praise a poet with whom we are all so familiar, and whose lines are treasured with such fidelity that they form in some measure the daily language of all cultivated people. The intellectual will continue to bespeak for Browning a higher degree of excellence, but the rank and file of humanity, like Mr. Locker's delightful young lady, while conceding to Browning that

"His *vogue* and his *verve* are alarming."

will prefer the author of "Miles Standish's Courtship" to severer thinking and obscurer speaking poets. And it must be gratifying, I think, to every American, in whose hearts the words will find an echo, to read Cardinal Wiseman's estimate of Longfellow's merits. In a lecture entitled "Home Education of the Poor," delivered some years ago,

the venerable Cardinal, with Browning, Tennyson, Swinburne, Morris, and dozens of other poets claiming his attention, asserted that England had no great poet who is to her laboring classes what Goethe is to the German peasantry. Then he added: "There is one writer who approaches nearer than any other to this standard, and he has already gained such a hold on our hearts that it is almost unnecessary for me to mention his name. Our hemisphere cannot claim the honor of having brought him forth, but he still belongs to us, for his works have become as household words wherever the English language is spoken. And whether we are charmed by his imagery, or soothed by his melodious versification, or elevated by the high moral teachings of his pure muse, or follow with sympathetic hearts the wanderings of Evangeline, I am sure that all who hear my voice will join with me in the tribute I desire to pay to the genius of Longfellow."

I have no trouble, in brief, in arriving at the conclusion that Mr. Longfellow's poem, as finely illustrated as I find it in "Christmas Evergreens," is well worth the price of the book. But the volume's merits by no means end with "Paul Revere's Ride." There is very much to admire in "The Telegraph Wires," by Mr. George T. Lanigan, erstwhile a telegraph operator on the Canadian lines, but now famous as the author of the "George Washington 'Esop Fables,'" and who is a writer of humorous editorials and verses for the New York World. Then there is Mr. Bryant's exquisite "Snow Shower":

"And out of that frozen mist the snow
In wavering flakes begins to flow,
Flake after flake
They sink in the dark and silent lake."

The many admirers of Benjamin F. Taylor, whose "River Time" is sufficient to keep his name as fresh and perennial in the memory of mankind as June roses are, will be glad to note that he has given his attention to the telephone, and that his half-earnest, half-jocular treatment of it in merriest rhyme is to be found in "Christmas Evergreens." But I must not go on enumerating and commenting on every item in the table of contents, or I shall shoot beyond the limit of space at my disposal. Let me summarize the remainder with the exception of the "Deserted Village," of which I must say something, for I am one of Goldsmith's warmest admirers, by stating that the selections are all admirable, particularly a little gem called "Fate," and that they are all exquisitely illustrated. I shall be much in error if "Christmas Evergreens" is not immensely popular with telegraphers as well as with the public generally.

"Sweet Auburn! loveliest village of the plain;
Where health and plenty cheered the laboring swain,
How often have I loitered o'er thy green,
Where humble happiness endeared each scene."

I wonder how many years ago it was that I read those lines from the "Deserted Village" in a loud, strident, school-boy voice? No matter how long ago it was; suffice it that whenever I read them now the long years intervening cease to be remembered, and I am again a little sun-browned chap with a freckled nose, and in spite of my bare feet inclined to the opinion that my neat nankeen trousers and calico jacket are a trifle more *recherche* than the attire of the other farmer boys in the class with me. The little boy with the shock of tawny hair has given way to the man with his cares, ambitions, vexations, and reverses, and the unsightly school-house in that benighted Massachusetts town where I first came to know of Goldsmith has been replaced by a more stately structure. Twenty years, perhaps, have flown since then, but, learning to love him in those far-away school days, I have gone on loving him better and better through all those hurrying years in which I have been outgrowing the nankeen trousers and the freckles.

It is all too easy to forget that which appeals to the understanding, but that which speaks to the heart outlasts health and manhood. The lame, the halt, the blind, and the bent sons of misfortune, do not turn for comfort, in their decadence, to that element in human ethics which appeals to the intellect. To them, in common with the young and fair, Goldsmith is one of those whose words lie deep down in their hearts, and I once heard of an aged traveler—referred to by the irreverent as a "tramp"—who, when ordered to move on, murmured as he cast a longing look at the trim cottages which he passed:

"O, blest retirement, friend to life's decline,
Retreats from care which never can be mine.
How happy he, who crowns in shades like these
A youth of labor with an age of ease."

Poor fellow! he was a kindred spirit of him who wandered

"With tuneless pipe beside the murmuring Loire."

It is not marvelous that he remembered the lines coned at school, may be, when he was a blithesome boy, with prospects bright and promising. But Goldsmith is not essentially the poet of the unfortunate. Broad and liberal in spirit, and sincere in sentiment, he wrote, like Burns, for all mankind, regardless of race, religion, or condition. When Germany's greatest son lay dying, think you he asked that something grand or somber should be read to him? Not at all. "Bring me," said Goethe, "The Vicar of Wakefield." So high a tribute to a man who was starved into writing stories in prose and rhyme will probably never be paid again. Such things happen but once in the world's history.

Washington Irving very truthfully says: "There are few writers for whom the reader feels such personal kindness as for Oliver Goldsmith, for few so eminently possessed the magic gift of identifying themselves with their writings." And that, perhaps, was the secret of Goldsmith's power. However humble the man's origin may have been; whatever of vicissitude and disappointment may have oppressed him, no one doubts the sincerity of what he wrote. His character, moreover, is written into every page, and as we read we come to know the man, and to love him devotedly. Ignored by a snob-like Boswell, overpowered by the sesquipedalian utterances of the ponderous Johnson, and ridiculed by his infelicity of speech by the superficial Beaulieu, he retired within himself, and with mind reverting to Lissoy, invoked the image of his aged father, and gave the world this charming picture:

"At church, with meek and unaffected grace,
His looks adorned the venerable place;
Truth from his lips prevailed with double sway,
And fools, who came to scoff, remained to pray.
The service past, around the pious man,
With steady zeal, each honest rustic ran;
E'en children followed with endeavoring wile,
And plucked his gown, to share the good man's smile.
His ready smile a parent's warmth expressed,
Their welfare pleased him, and their cares distressed,
To them his heart, his love, his griefs were given,
But all his serious thoughts had rest in heaven.
As some tall cliff that lifts its awful form,
Swells from the vale, and midway leaves the storm,
Though round its breast the roiling clouds are spread,
Eternal sunshine settles on its head."

Then arose before him a vision of the rude school-house where he studied, in rather a desultory manner, I fear, under the pedagogue Byrne. Boswell, Beaulieu, and his other traducers are at once forgotten. He recalls the scene as he last saw it, and paints it in colors so warm and natural that mankind shall forever see it with the poet's eyes:

"Beside yon straggling fence that skirts the way,
With blossomed furze unprofitably gay,
There, in his noisy mansion, skilled to rule,
The village master taught his little school;
A man severe he was, and stern to view,
I knew him well, and every truant knew;
Well had the boding tremblers learned to trace
The day's disasters in his morning face;
Full well they laughed with counterfeited glee
At all his jokes, for many a joke had he;
Full well the busy whisper circling round
Conveyed the dismal tidings when he frowned;
Yet he was kind, or if severe in aught,
The love he bore to learning was in fault;
The village all declared how much he knew;
'Twas certain he could write, and cipher too;
Lands he could measure, terms and tides presage,
And e'en the story ran that he could gauge;
In arguing, too, the parson owned his skill,
For e'en though vanquished, he could argue still;
While words of learned length, and thundering sound,
Amazed the gazing rustics ranged around;
And still they gazed, and still the wonder grew,
That one small head could carry all he knew."

Poor Goldsmith! his fame and his glory came too late. They were dawning when he laid down the cares and trials of this world, and, in his forty-third year, closed his eyes on the scenes which had witnessed his partial triumphs, his struggles against poverty, and the end of an existence scarcely less than miserable. He has a monument in Westminster Abbey—a small compensation for his sufferings when living. It is the old story of the living Homer begging his bread through the seven cities which claimed him when the vital spark had fled. The rearing of a monument to such a man as Oliver Goldsmith seems like a mockery—the giving of a stone where bread was asked. He needed neither plinth of bronze, graven marble, nor carved escutcheon; for his fame will be ever green in the hearts of all lovers of the beautiful and true in art and letters, and we shall deserve to forget our mother tongue when we have forgotten to revere the memory of a man

whose charms of mind and goodness of heart triumphed over all worldly calamities, and enabled him to leave behind him so much that is sweet, noble, and elevating. Though his ashes rest in the Poet's Corner at Westminster Abbey, his name will always suggest the land of his birth; for he has contributed, in a larger degree than any of his contemporaries, to the end of rendering classic the soil he loved so well; and Ireland owes him a debt she can never repay, since, as he was fond of saying, she bequeathed him nothing but his brogue and his blunders.

JOHN OAKUM.

The Telegraphic Spider-Web.

After reading in the last issue of THE OPERATOR the W. U. report; after taking note of their two hundred thousand miles of wires, it is not difficult for one to imagine that he sees those wires, like threads of silver, taking the shape of a gigantic spider-web, covering the entire land. Follow the idea still further, and it appears as if the companies that have been absorbed by the great spider, were but unfortunate flies—all met the same fate. Many operators will recall the time when the P. & A. of happy memory was a gorgeous blue-tailed fly, with most melodious buzz, and how its wings became entangled in the web, and it died an exceedingly early death. Then the illustrious A. & P. fly—an uncommonly lively one, with sharp sting—gave the web a hard shake. However, there was immediate activity about "headquarters," an extra turn or two was taken around the unfortunate fly, and it gave up the ghost. Now comes the fly that we have been reading about—a beautiful Continental fly—whose wings are said to be heavily fringed with gold. We can be pardoned, I hope, if we fail to entertain a robust faith in it, and sadly fear that the Continental will also accept the ever-open invitation, and "walk into my parlor." We shall see.

There seems to be considerable bitterness developed toward the W. U. Co. just at present on account of economy in supplies. The economical wave struck us some time since. Before it reached us, however, it had struck New Orleans, and we were told that the operators there were growing lengthy nails on the little finger of their right hands, in order that they might split them, when of sufficient length, and thus save pens. Since we read of that something else has struck New Orleans, and many a poor operator has had the economical strain lifted from his weary, battered brain. Poor Dick Babbitt! Angel Azrael has ministered unto him also. I knew him well, and my memories of him are associated with some of the happiest periods of my life. Brave, noble Dick! It was not necessary that you should have faced the terrors of the pestilence to prove that yours was a noble soul. May thy body rest in peace in its lonely grave in the land where the magnolia blooms, and thy freed spirit mingle with those of the noblest gone before.

But let us take another look at this economical economy business—this sparing, careful, thrifty, frugal, saving, close economy. Your editorial, Mr. Editor, was relished, but when we came upon the beautiful instance therein given of the practical workings of economy, our hair riz. Whew! Whoop 'em up! Somebody hold him! He cuts out words, and buys two-cent pencils with the proceeds! If that isn't carrying out the Scriptural doctrine, "an eye for an eye," "a tooth for a tooth," I don't know what is. If it were not so laughable, it would be sad. On second thought, it is a shade mournful. When we reflect that the "manager of the office in a thriving county seat of 10,000 inhabitants" will no doubt claim and stoutly protest that he is a member of the profession that produced an Edison, it must strike all of your readers as a little "off" in him, to say the least, to cut out a word in that manner to save two cents. The next time he has occasion, on account of the niggardly, miserly policy of the company, to need a few pencils, let us know, and we will send him three or four, and pay the money slap down out of our own pocket, and thus, while holding aloft the "banner with the strange device"—honesty—will at the same time encourage and stiffen up the trade in pencils among the poor cripples who infest our streets. In closing, let me urge upon all the beneficent results of resignation, endurance, patience.

"How poor are they that have not patience;
What wound did ever heal but by degrees?"

—Shakespeare.

However, all men who work quad wires will not take Shakespeare for it, but will indorse Lansdowne's way of stating it, to wit:

"But patience is the virtue of an ass
That trots beneath his burden and is quiet."

ROTAREPO.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

November 1st, 1878.

A specimen copy of this issue of *The Operator* is sent to a very large number of offices where we have not now any subscribers. The object is to secure both all the new subscribers we can, and also agents for the paper and for our other publications. We will send *The Operator* from the present time until January 1st, 1880, prepaid by mail, with addresses changed as often as desired, on receipt of \$1.35. Subscribe now while you think of it. Particulars in regard to agencies on this page.

No matter what you want from New York, whether it be in the line of telegraphic goods or not, send the order to us. We will see that you get exactly what you want, and at the very lowest price, never charging you more than if ordered direct, and very often considerably less.

CONSIDERABLE matter intended for this issue is held over for want of room, including Chicago and Washington Notes.

EVERY poem in "Christmas Evergreens" is handsomely illustrated, some of them containing from five to eleven pictures.

SUBSCRIBERS who receive more than one copy of this issue of *THE OPERATOR*, will please use the extra ones to the best advantage in the way of getting up clubs for us.

WE would draw the attention of non-subscribers who may see a copy of this issue of *THE OPERATOR* to the interesting nature of the paper, and beg to suggest to them that they miss a great treat by not becoming regular subscribers. We hope they will now see the error of their ways, and send in their subscription at once.

THE price of Western Union stock on Wednesday, October 30th, rose five per cent., and closed at 101½! The increase in price, which has been going on for some time, is accounted for by the renewal of the report that the surplus stock of the Company is to be divided among the shareholders, though the present prosperous condition of the Company may have something to do with it. This proposed division of the surplus stock has hitherto been fully explained in *THE OPERATOR*.

ON Saturday, October 26th, Mr. Edison was presented with a fine boy, which the papers take pleasure in referring to as that genius' latest talking machine. On the same day the wife of Mr. Joseph Christie, of Philadelphia, also gladdened the heart of her husband with a young son. As this is Mr. Christie's first boy, and weighed at birth thirteen pounds, we can well pardon him if he feels proud over the youthful future President. We hope that the younger Werner may grow up to be as expert an operator, as sterling a gentleman, and as graceful and elegant a writer as his father; and if we showered a column of congratulations upon him, we could not wish him more.

The Yellow Fever in the South.

At New Orleans, A. D. Babbitt, operator and Secretary of the Telegraphers' Aid Association, was taken sick Oct. 15th, and died Oct. 20th. H. H. Hunt, chief operator, was taken sick 19th, and died on the 23d. Robert Forester, mgr., was taken sick Oct. 24th, and Wm. Steble, clerk, on the 29th. These, and the other sick men in New Orleans, are doing well at the time we go to press.

No new cases have been reported at Memphis since last issue. Manager Baker has resumed duty, and the others sick in that city are doing well.

At Jackson, Miss., Manager Julianne and Operator J. H. Doherty were reported up on the 17th. M. Crane, assistant repairer, was taken sick on the 15th. He and Repairer McNeil, reported sick in last issue, are doing well.

At Greenville, Miss., Operator E. A. Dennett resumed work Oct. 14th. Operator Hudson and Repairer Kavanagh were reported up on Oct. 24.

At Decatur, Ala., Repairer J. V. Thompson died Oct. 19th.

At Mobile, Ala., Operators Taylor and Hernandez are reported doing well.

At McKenzie, Tenn., Repairer Thomas Callon, who was taken sick Oct. 14th, died on the 16th.

At Pascagoula, Miss., Manager S. H. Alley died Oct. 21st.

At Chattanooga, Tenn., Operator J. J. Riley, some of the members of whose family have been sick with the fever, was attacked on the 25th.

Dr. Bartholomew, reported in last issue as having died at Nashville, died at Memphis. He volunteered from Nashville as a physician.

Mr. J. J. McDermott, well known in the East as an expert operator, and a writer of no mean ability, died at New Orleans Oct. 23d. While working the New York quad one night he told the operator that he must stop, as he was all burning up. He died three days afterward. In a letter to us a few days previous to his death, forwarding his own and another subscription for *THE OPERATOR*, Mr. McDermott said: "I should like very much to write you a good letter from here, but we are so very much unsettled, mentally and physically, that it is quite a task to do justice to even a note. When Bill West joined the vast army at present under the command of Capt. Yellow Jack, last night, he left me the only survivor of the old night force doing night duty. So far I have pulled through on the practice of a theory which I adopted at the outbreak of the epidemic, and although subjected to the severe strain of long and irregular hours, I feel comparatively well. But it's a question which will play out first, Yellow Jack or I."

A correspondent on the Louisville & Nashville Railroad, under date of October 21st, writes: "I see no mention in your issue of 15th inst. of the deaths of operators on this line. We have lost quite a number of our best men. C. Curtis, agent and operator at Guthrie, Ky.; John H. Beeler, W. H. Steed, and H. B. Samuels, of Paris, Tenn.; Hop Owen, at Brownsville, Tenn.; I. G. Nicholson at Mason, and K. Garrett at Withe, all true and faithful men, died at their posts nobly battling against the plague."

It is said that the loss by the yellow fever, through the destruction of crops by neglect, stoppage of trade, and minor causes, will be fully \$200,000,000.

The Boston operator previously mentioned as having shot himself in the leg while stopping at French's Hotel, in this city, on his way to New Orleans, which shooting was, of course, accidental, has recovered, and again volunteered for duty in the South, but there being no vacancies, his services were not accepted.

Under the heading of "A Stricken Fraternity," the New Orleans *Picayune*, of October 21st, says:

At one o'clock yesterday morning, A. D. Babbitt, a telegraph operator in the Western Union office, died of yellow fever. On Wednesday he was congratulating himself, in the presence of some of his friends, at having escaped the disease to that time, and expressed the belief that he would pass safely through the few days intervening before frost. Yet, even while he spoke, the fever was in his system, and he was prostrated an hour or two after the conversation. Three days later he died, and was buried yesterday afternoon in the Washington Cemetery. A. D. Babbitt was thirty years of age, and a native of Michigan. He leaves a wife, who is at present residing in Louisville, to mourn his untimely death. Mr. Babbitt was highly esteemed by his fellow operators, who honored him with the secretaryship of the Telegraph Relief Association. The employees in the Western Union office in this city have suffered terribly by the epidemic. Of twenty of the old operators, nineteen took the fever. Of these, E. W. Barnes, manager, Hugh Irvine, chief operator, W. K. Woolf, Fred. B. Moxon, and A. D. Babbitt have died. Three of the substitutes and several of the clerks have also been prostrated with the fever.

Since this was published two more operators have died in the same city, Messrs. Hunt and McDermott.

IMPORTANT INSTRUCTIONS TO AGENTS.

Of the present issue of *THE OPERATOR* about 10,000 extra copies are printed and mailed free to offices in which we have now no subscribers. Besides securing by this means a large number of new subscribers for the paper and orders for books, we hope, also, to get, if possible, at least 5,000 agents for "Christmas Evergreens," "Lightning Flashes," and our other publications. The commission to agents is so unusually liberal that we feel justified in promising them better compensation for the time spent at the work than they are likely to make at anything else in which they may engage. It is not intended that the agency should interfere with regular duties, but every operator has a large number of acquaintances to each of whom he can sell at least one copy of "Christmas Evergreens," and possibly also one or more copies of the other books.

"Christmas Evergreens" is really, at the price, one of—if not the—handsomest holiday books so far published, and there will be no trouble whatever in selling it to every person who intends making holiday presents, if you have only a sample copy to show them. From the present time up to Christmas, every operator who makes the slightest effort ought to be able to add very materially to his salary by interesting himself in the sale of this book.

THE PRICE TO AGENTS.

To telegraphers who act as agents we will supply the books and paper at the following extremely low rates, mailed pre-paid either to them or direct to the customer:

	Regular Price.	Price to Agents.
Christmas Evergreens.....	\$1.50	\$1.00
Lightning Flashes.....	1.50	1.00
THE OPERATOR one year, or from Nov. 1st, 1878, until Jan. 1st, 1880.	1.25	1.00
Oakum Pickings (paper).....	0.75	0.50
Sam Johnson (paper).....	0.75	0.50

WHAT AGENTS SHOULD DO.

First of all they should order at once a copy of "Christmas Evergreens" to use as a sample, as

they cannot expect to secure many orders unless they can show intending purchasers what the book is like. It would be well, also, to order one copy each of "Lightning Flashes," "Oakum Pickings," and "Sam Johnson;" but these are not so necessary as is "Christmas Evergreens." That agents may get to work immediately, and at little or no expense to themselves, we have decided to send, to agents, single copies of "Christmas Evergreens" or "Lightning Flashes"—to be used strictly for the purpose of securing orders—at one dollar apiece, and copies of "Sam Johnson" or "Oakum Pickings," for the same purpose, at fifty cents each. Therefore, send one dollar at once for a copy of "Christmas Evergreens," and get right to work. When you sell only two copies at \$1.50 each you will have secured your own copy free. It is hoped that those not intending to act as agents will not take advantage of this very liberal offer for the purpose of securing copies of the books at reduced rates.

HOW TO ORDER BOOKS.

Send remittance with each order, deducting your commission, and give your full name and address in each letter. See that post-office orders are made payable to W. J. JOHNSTON, and address letter legibly: "W. J. JOHNSTON, PUBLISHER, P. O. Box 3332, NEW YORK. We can in no case send books to be paid for on delivery; the money must in all cases accompany the order. Procure post-office order or draft when you can, or register your letter. Don't send more than a dollar in an ordinary letter.

We want agents in every city and town where there is a telegraph office, and the more agents we secure the better we shall be pleased. If circulars in reference to "Christmas Evergreens" are desired, write for them, and they will be mailed free, or if any further information is wanted, drop a postal card and it will be furnished.

The Western Union's New President.

Dr. Norvin Green, the new President of the Western Union Telegraph Company, is fifty years of age and a native of Indiana, though much of his early life was spent in Kentucky. He is a graduate of the Medical Department of the Louisville University, and practiced medicine for some years in Kentucky. He was also a member of the Legislature of that State for several terms. Dr. Green's connection with the telegraph business dates back to 1854, when he became one of the lessees of the New Orleans and Ohio Telegraph Company, afterward called the Southwestern Telegraph Company, of which he was elected President. In January, 1866, the Southwestern Company was consolidated with the American, and in July following the latter was absorbed by the Western Union. Since the consolidation Dr. Green has acted as Vice-President of the American, and subsequently of the Western Union. He, therefore, brings to his new position a stock of experience in the management of a telegraph company—and especially of the company of which he has become President—that probably no other man in the country can boast of. The doctor is also well versed in law matters, particularly as affecting the interests of telegraph companies. Besides this he is a shrewd, practical business man, possesses good executive ability, and will no doubt keep the business of the Western Union up to its present high standard. We hope that

the new President will endeavor to promote a better feeling between the operators and officers of the company, and be speedily brought to see that the antagonistic feeling at present existing conduces to the interests of neither the company nor the employes, and that the so-called economy of paying starvation salaries to the class of talent that will work for them, and the cutting down of supplies, both in quantity and quality, are not in the end a saving to the company.

NOTWITHSTANDING the litigation now in progress in reference to the telephone, Messrs. C. E. Jones & Bro., of Cincinnati, continue to sell the instruments complete and outright, as will be seen by their advertisement on first page. Mr. Jesse H. Bunnell, of this city, also advertises telephones in this issue. These manufacturers evidently do not think that the suits brought by the Bell Telephone Company will amount to much. There is nothing new to report since last issue in regard to the telephone suits. The defense of the Gold and Stock Company is not yet known, but will probably be that the caveats of both Bell and Gray were filed at the Patent Office on the same day, but that Bell himself acknowledges that the invention upon which he applied for a caveat was subsequently found not to work, and abandoned. The Gold and Stock people say that it was different in principle from the telephone as now perfected, and insinuate that Bell got his ideas from Elisha Gray. The courts will now have to decide the question, and whoever wins, it will only be at enormous cost. It would have been more economical and better all around if both companies had "pooled their issues," but doubtless the Gold and Stock thought it could get the monopoly of the telephone without paying Bell anything.

New York Telegraphers' Rifle Club.

The fourth competition for the prize rifle, which took place at Mott Haven October 19th, was slimly attended, owing to a misunderstanding about the time. President Doran made the highest score, and as both he and Mr. Haskins have already won two certificates, their chances of securing the prize excite considerable interest in the future matches. The following were the scores:

M. W. Doran.....	42	E. S. Leaycraft.....	34
A. Metzger.....	39	R. W. Pope.....	23
R. Forsholm.....	34	C. D. Haskins.....	29

Mr. Haskins has also won the wooden gun for the second time. The competition for the championship medal took place at Zettler's gallery on the 26th, Mr. Rudolph Forsholm making the highest score, 44.

An open-air competition is to take place at Hasting's range on election day, at which a brilliant time is expected.

MR. THOMAS NICHOLS, whom our Boston correspondent in last issue referred to as being connected with Hellihan's telegraph college in that city, writes to say that he has now no connection with Hellihan, having cut loose from the latter October 2d, on account of rumors that his reputation would be compromised by having anything to do with Hellihan or his so-called college. He adds that he is not a graduate of [Cooper's] Union, but of the Brooklyn A. & P. office, and that his salary in Boston is \$65 a month, instead of \$40, as reported. We congratulate Mr. Nichols on having seen the error of his way, and hope that in future he will not allow himself to be mixed up with swindling telegraph colleges, or countenance in any manner an increase in the number of the votaries of an already overcrowded business.

THE HAND-BOOK OF THE ELECTRO-MAGNETIC TELEGRAPH, advertised on another page in this issue, is one of the most useful little books we have seen in a long time, and, we have no doubt, will be heartily welcomed by the very large number of telegraphers who are not far enough advanced in the mysteries of electrical science to be able to contend with the more advanced works [on the subject]. The present one is just what they need to commence with, after which the others will come easy. We will thank those desiring copies of the work to order it through us. The price is 50 cents in fancy boards, and 75 cents in cloth.

THE appearance of Mr. James D. Reid's book, "The Telegraph in America," is promised within a few days. It will consist of 830 royal octavo pages, and be sold at five dollars a copy. The book will contain the early history and struggles of the electric telegraph in this country, the lives of Professor Morse and Mr. Orton, as well as shorter sketches of all those prominently connected with the American telegraph service, past and present, and will undoubtedly be an interesting work. Copies may be had of Mr. Reid, or will be mailed prepaid on receipt of price by Mr. Johnston.

WE hope we shall not be called vain if we say that we feel proud of "Christmas Evergreens," and believe that it is a book that is destined to prove a great favorite with all classes of readers. Certainly there has been enough care and expense bestowed upon it. We shall thank readers of this issue if they will call the attention of their local booksellers to "Christmas Evergreens," and try and have them order a few copies. Price to booksellers one dollar net, with postage or expressage extra. To telegraphers who act as agents, the price is only a dollar, postage prepaid.

THE officers of the Oontinental Company have adopted the course that we last issue hoped they would. The tariff to Philadelphia has been kept at fifteen cents, irrespective of the fact that the rate over the A. & P. line is only ten cents. The Continental Company expects to be able to keep the tariff to Philadelphia permanently at fifteen cents for ten words, and is now, it is said, doing all the business its wires will accommodate at that rate. Two more wires are being strung to Philadelphia, and the line is being rapidly extended to Baltimore and Boston.

The early man writeth his name with a flourish, bangeth the door, and maketh a noise, for his heart is without guile, and he feareth not the words of the chief; but the late man appendeth his signature meekly, stealeth into the operating room on tiptoe, and stumbleth over a chair, and the last condition of that man is worse than the first.

PERSONS not wishing to subscribe for a longer period, can have THE OPERATOR mailed to them, pre-paid, until January 1st, 1879, for twenty cents, but we much prefer yearly subscriptions.

There is a daily consumption in the world of over ten thousand lead pencils, though it is not the fault of the Western Union that the number is quite so high.

In the Irish language the electric telegraph is called *Syeol abada bairia*, which in English means "news on stilts."

The Last Man.

The Last Man is believed, in telegraphic parlance, to be the "all-night man" connected with any large office. The term is well understood by telegraphers, except in the case of green countrymen. Thus, when Zac, Falls came in from the coal regions, and was told by a chief, who was particularly fond of extra big words, that he would be required to act temporarily as the "trogholodytic man," poor Zac, got scared, and returned afoot the same day to the country. But among the older and more experienced telegraphers, where the position is thoroughly understood, the tradition is also cherished that the last man—that is to say, the regular all-night man—is accorded by our common law the privilege, or, at least, the reputation, of appropriating and taking home the office clock and other loose articles of furniture, or any overcoats, hats, or umbrellas that may chance to be lying around loose after midnight. This legend doubtless arose from the custom of the early men "off" of always selecting the best hats in the cloak room, and which practice would, of course, by all rule and precedent, entitle the later men to letters of marque on whatever remained. The custom is also said to have sprung from the official habit of charging the cost of all used up, broken, or worn out articles to the operators, and particularly to the last man, on the violent presumption that, as he was in charge of the office all night, he either used up, smashed, or wore out the damaged articles himself, or knows why they did wear out after only ten or eleven years of active service. Under this somewhat novel rule, the regular "last man" pays from his private exchequer for more broken windows and lamp shades, lost hats, worn out three-legged stools, dilapidated overcoats and umbrellas, than any other man in the business. It is, therefore, no wonder that the unwritten law of reprisals suggests his taking home whatever loose and portable objects he may "find" after hours, since, if what a man pays for is his own, it will be found that the expense of fully one half of the company's new furniture and, say, one manager's overcoat in ten, with possibly twenty-five per cent. of the chief operators' hats, is defrayed out of the salary of the last man.

Having briefly discussed what has hitherto been popularly supposed to be the "last man," we may now speculate upon the true Trogholodytic Man—the lonesome creature at whose disappearance, which will certainly ensue some day, our grand old race will be extinct.

Now, it will be said at once that there are no indications of the present race of operators becoming extinct, and that to speculate upon the fate of the Last Man would only be a waste of time. Let us see. As a Californian has recently shown, to his own satisfaction, that there are no plugs, I would not be afraid to attempt to demonstrate, by the same intricate but ingenious method, that there are really no operators; but I will, for the present, confine myself to proving that the race of "Operators" is becoming extinct. To do this effectually, it is only necessary to write down the number of operators at some given period in the past, and the number of operators now; subtract the latter from the former, and the difference will, of course, be the ratio of our gradual decay. Now, judging from the oft repeated reminiscences of our "old timers," there were, at no very remote date, at least two million operators at work at one time on the Union Pacific Railroad; though, through finding that so many of these renowned travelers have never been outside of their native Eastern villages, I have learned to doubt these figures. Reasoning, in another direction, from the fireside stories of those who claim to have been out with the "Russian Extension Expedition," there must at one time have been not less than seven hundred thousand American operators in Siberia. Thus, after allowing for the exaggeration inseparable from our profession, but considering carefully the number of men whom Nicholls says he has killed off daily by his fast sending, it will still be seen that we must have had, at a comparatively recent date, no less than two million operators. And what are the figures for the present time? We have now altogether about thirteen thousand telegraphers, of whom, taking Chicago as a criterion, at least eight thousand would seem to be chiefs and assistant chief operators. A more accurate semi-official calculation, however, announces that the present fraternity of thirteen thousand telegraphists is composed of fifteen hundred legitimate chiefs, three thousand nondescript "traffic chiefs," "chiefs of sub-divs.," etc., eight thousand four hundred and three country "managers," and only ninety-seven common "operators."

A reckless, harem-scarem person, confronted by these figures, would jump to the conclusion that operators, like other people, sicken, die, and are buried

by a subscription paper circulated in the office, and that our profession is literally "dying" out. Now, nothing could be farther from the truth than this notion, for it is well known that real operators never die. True, it was once popularly believed that the Scientific Editor of the *Journal of the Telegraph* died after penning a nine column article on "The Culture of Carrots," but, although fifteen of his non-telegraphic subscribers perished in the attempt to read it, it was afterward discovered that the Scientific Editor was merely hiding from the irate relatives of the victims. The truth is that telegraphers, after a number of years of service, become ashamed of the common but grand old title of "operator," and suddenly disappear, are mourned for as dead, and, after spending the insurance money to which we all contribute a dollar apiece, suddenly blossom forth in their original rural haunts as "Managers," although the duties still combine those of operator, lineman, batteryman, and messenger. The great Nicholls, late of Philadelphia, is a conspicuous example of this ethereal and ever-changing character of a telegrapher's life. It is well known that he was first heard of in New York—then called New Amsterdam—in the year 1688, when he came from some mysterious region floating down the North River on a stray log of wood. He disappeared some time during the Revolution, and was next heard of in New Jersey, after the war of 1812, since which time he has periodically disappeared and resurrected himself until his departure from Philadelphia penniless, followed by the announcement of his arrival next day in Texas, is a matter of no surprise to us. Never born, but cast up like Undine by the waves at the fisherman's door, the real old time operator never dies; although, as I have shown, he undergoes some periodical but mysterious translation from the world. Many years of close observation has shown me that some few become buried for long periods under vast piles of unliquidated bills for miscellaneous debts; some lose their grips and are discharged; some melt into thin air and vanish with the funds of the company, after a week of extraordinary flourishing business; some go one way, some another—but none die. Pick up a telegraphic paper any week and you will read the only obituary notice which a true old-timer ever gets—something in effect as follows: "Lije Skoffem, for three years night owl at Coffin-hole Station, has resigned, and was last seen on a mule between Bitter Creek and Red Desert, bound west—destination unknown." In a few years Lije reappears at Garden City, or some such attractive spot, as "Manager," and the gradually thinning list of "operators" is tallied one less. This peculiar process is continually going on, as relentlessly and surely as fate, and its study brings us once more to the original question, viz: the Last Operator, the records quoted having shown us conclusively that, almost obscured in the refulgent light of thirteen thousand "managers," "chiefs," etc., only ninety-seven "operators" still remain, the last proud remnant of a once numerous class, who proudly bore the illustrious title of "operator."

There was a very excellent custom among the Egyptians of bringing in a corpse during a grand banquet, and hawking the stark figure about the room, with the object of restraining the thoughtless and extravagant revelers by reminding them vividly of what they must soon come to. So with our army of thoughtless managers, chiefs, and traffic chiefs, reveling in high-sounding and new-fangled titles, disdaining the old designation of "operator," it is well to start around once in a while a vision of the last man, "on a mule, bound west," in order to show the direction in which they, too, when their day is over, will solemnly wend their way. To the remaining ninety-seven operators, who will gradually decrease and become country managers, too, it may serve to point a moral, and lead them to reflect on some possible returning prodigal who will revisit the familiar scenes of his youth only to find himself lost in a wilderness of novelty. Entering the dingy office to inquire if the "operator" that used to work "old 41" is still alive, he will be confronted with a "traffic chief;" asking for the "operator" who used to "whoop 'em up" on the old press wire, he will be shown to a "wire chief," and looking about for the boy who, in days long past, took charge of the coat room, and invariably handed out the wrong hat, he will be met by an imposing "assistant chief of sub-div. 41, section 'M.'" If it be pay-day, the cashier will be absent, as usual, and all the "Managers" will be standing in line, just as the operators did of yore, sighing vainly for that functionary's speedy return. Feeling that he is really the Last Man, the dejected prodigal will at last recognize the fact that the dreary winter of telegraphic old age is indeed coming on. One day's experience will show

him that "operators" are no more; and with recollections keen as poisoned arrows, he, too, will turn in disgust, mount his mule and ride off sorrowfully, carrying the closing number of THE OPERATOR in his pocket. He will not die, of course, but in a few days thereafter the Trogholodytic Man will be seen for the last time "between Bitter Creek and Red Desert, on a mule, bound west, destination unknown," and our grand old race—great, glorious operators—will be extinct forever. WERNER.

A Rude Awakening.

It was one of those soft, dreamy days common to September that I was sitting beside my instrument with a pile of 17's, patiently waiting the end of a long report which a melancholy plug was droning into Toronto, at a disgustingly monotonous rate.

Nature appeared to have taken a rest on that particular day, or gone away to make arrangements for the fall trade. A solemn stillness pervaded the atmosphere of the village, broken only by the musical ring of the blacksmith's hammer, or the farmer on the distant hillside unmusically swearing at his oxen. Scarcely a sign of life was visible, except a few bummers stretched out on the hotel verandah listlessly discussing the merits and demerits of prohibition.

An open window beside me looked out upon one of those beautiful scenes so frequently met with in this part of Canada. In the foreground was the lake, its glassy surface reflecting the smallest object, even to the solitary coon floating lazily around, apparently buried in profound and refreshing slumber. I might here remark, however, that this is one of the latter animal's artful tricks to deceive the innocent and unsuspecting little fish. In the distance, the steamer "Queen of the Lakes," could be seen gliding among the densely wooded islands with a gay pleasure party on board, and the sounds that come rippling across the water showed that they were having a glorious time. The remainder of the lake was dotted with small boats of every description from the lumberman's unwieldy punt to the birch-bark canoe containing some untutored child of the forest, with his wife and family, and all his worldly possessions. From the opposite shore the howling wilderness stretched away, broken here and there by a small clearing which some honey-handed pioneer had reclaimed from the primeval forest, and there erected his humble habitation, scarcely discernible amid the logs and stumps surrounding it. In the office Rodney and Patsey were playing a social game of euchre to pass away the time, and their low murmurs of "make it diamonds," and "play your spade," only added to the general effect.

Suddenly an angelic creature, for whom I had long nourished a consuming but unrequited passion, commenced playing "Days of Childhood" on the piano, and as the music came floating through the air it sounded inexpressibly sweet. Under its genial influence I seemed to feel the spirit of my childhood's days creeping over me. Falling into a dreamy reverie I was a boy once more, with all a boy's enthusiasm for marbles, hop-scotch, and other people's fruit. Again I was the terror of the neighborhood—the pampered and conceited leader of all the juvenile depravity of the place—the false friend of every strange and homeless dog whom I lured to my side only to send roaming through the world with his narrative decorated with old oyster cans, discarded teapots, and other ornaments of a questionable character. Once more I was a school-boy with a profound contempt for such fellows as Lissy, Horace, and Virgil, and a whole-souled veneration for such heroes as Red Eye, the Indian Scout, and Big Foot, the Terror of the Plains. I laughed aloud as I thought of the times when with my ears tingling, my hands blistered, and my back laid out in town lots from the effects of some well-earned chastisement, I would slide behind the woodpile, and register a solemn and indissoluble vow that life would be gloomy and desolate until I had killed a couple of school-teachers. A cloud passed across the sun, and threw a dark shadow over the earth, as I thought of my professional life, and plugdom's days loomed up before me. Once more I was answering some rusher with an assurance that deserved success, and a determination to copy, or perish nobly in the attempt, but, after breaking three times in the address, the same deadening shock went through me as in imagination I heard the well remembered: "start your fanning mill," "swim out," or, "take that unfortunate plug out in the yard, and shoot him." Just then everything appeared to grow dim. The music and Rodney's and Patsey's murmurs became more and more in-

distinct, and finally ceased. The funeral plug under whose influence the sounder still clicked in a dismal manner appeared to be on the point of losing his grip, when the line was suddenly and unceremoniously snatched from his weakened grasp, and new life sprang into the sounder as the division superintendent called, and was promptly answered by the general superintendent. After discussing various business matters for a considerable time the division magnate informed his superior that the agency at Farnsville was vacant, and that if he (the general potentate) had no other views in connection with the office, he would appoint me to fill the vacancy. The general grandee replied that he knew of nothing against the appointment, so it was settled that I was to receive the agency of an office paying over \$125 a month. I need scarcely remark that I was in the seventh heaven of delight. Here was a step on fortune's precarious ladder that exceeded my fondest anticipations, and I was soon lost in a delightful labyrinth of speculation as to how I would conduct myself when I assumed the dignity of my new position. Upon concluding their conversation the division superintendent called my office, and in my haste to answer, my head came in violent contact with the window out of which I had been leaning, and I . . . I awoke—to find the rain pouring down as it never poured since the deluge, and more than a fair and equal proportion pouring down the back of my neck—awoke to find a sanguinary row in full progress between Rodney and Patsy, which had originated in Rodney discovering an ace and two bowers in Patsy's sleeve; and the way the office furniture was flying around was painful to behold. I was kept busy for awhile dodging the rulers, ink bottles, and other missiles that were flying recklessly about, and it was not until an insulator landed under Rodney's ear that I was able to look around, and convince myself whether I had been transferred to another world, or kidnapped into an insane asylum. I was soon satisfied that neither calamity had happened me; but a deplorable change had come over the world during the two short hours that I slept. The pleasure party had just landed from the steamer, and were skurrying home through the rain. Wet, mud bespattered, and fighting mad, they vented their feelings in language of the most vigorous description.

The angelic creature whose music had so charmed my senses was out adjusting a rain water barrel, and when the latter, with the obstinacy for which barrels are notorious, rolled down the hill against the fence, her language was not inexpressibly sweet. Turning away with a sigh that could be seen with the naked eye, I adjusted my instrument, which an ink bottle aimed at Rodney had sadly demoralized, and found that Webster was calling wildly for all he was worth, and filling up the resting places with 17, 18, and other invigorating abbreviations. As I seated myself to scoop in the festive Morse, I couldn't help moralizing aloud: "Thus do the alluring shadows of the ideal melt away before the consuming fires of the real, like an operator's salary on pay-day;" and from behind the stove where Patsy was fastening down the top of his head came the plaintive echo: "Yer jist bet yer life!"

Q. CUMBERS.

A Night with a Thirty Dollar Man.

The following items taken a few nights since on one of the heavy Chicago wires will fairly illustrate the fertility of the minds of the gentlemen who are employed in the Chicago office under the thirty dollar grading system.

In reading copy one of them would have us change the name of that ancient street which it has borne from time immemorial from Water to Weber. He would have the boys run all over the city in the vain attempt to find Jay Landon & Co., North Street, when you and I, dear OPERATOR, know that the firm is Joy, Landon & Co., and that they carry on business in North Street. He would inaugurate a new kind of pavement, and instead of the old wooden affair, which has seen some good service, would substitute a woolen one. He also shows his radical propensities in quite another direction, and would change the name of the town of Gloversville into Glorussville, and substitute Narragansett for Narragansett; and a certain kind of woolen jacket which takes its name from Cardigan in Wales, would hereafter be known as Cardigan.

His views in regard to dots and dashes do not accord with those of Mr. Phillips. He would rather make three dots, and have us transcribe the word *steeves*, than one dash, and make it *tierces*. That useful piece of domestic furniture around which our

forefathers, ourselves, and our children have gathered and spent many a pleasant hour in winter, would suffer a complete transformation, and be known no more by the dear old name of stove, but must henceforth be called *stove*. And a certain kind of fabric which our mothers and sisters have hitherto known by the name of poplin shall be recognized in future when we say poplier.

Besides these few which we have noted, he would also have us put down *Fowler* for *Fowler*; *so for to*; *coptor* for *captor*, *ave* for *ore*, and so on. I have shown you how he ignored old streets, firms, pavements, towns, jackets, stoves, etc., as if with one sweep of his ruthless hand he would annihilate them all, and substitute something of his own creation; yet still he was not satisfied. Old things were a bugbear to him. It was wearing well on in the early morn, and I felt jaded and tired from the night's exertion, and was congratulating myself that my experience with thirty dollar men was at an end for the night, at least, but just then the word *old* jarred on the tympanum of my ear. It did not sound well with the context, so I asked him to try it again. If any doubts previously rested in my mind of his intention to obliterate existing institutions they were quickly dispelled when he told me to make it "& Co." Just then I was relieved, and wended my way homeward, wondering how many mistakes the thirty dollar man had made which I did not detect, and how much I shall be called upon to pay six or twelve months hence on account of the blunders which had been perpetrated that night.

JIMBO.

What Becomes of Old Telegraphers?

Some one asked me the other day: "Do telegraph operators ever grow old?" and I replied: "Why, my dear sir, your question is superfluous. Did you ever see an aged telegraph operator?" He admitted that he never had had that pleasure, but muttered something about Prof. Morse, who was as full of years as of honors when he shuffled off this mortal coil. I hastily assured him that although the father of our mystic art was a great and good man, whose memory is cherished wherever his name is known, he was by no means an experienced operator, and that if he had sat down incognito at one end of a busy wire, and endeavored to handle the business, he would have been "run off," in a very few moments, and probably enjoyed the peculiar sensation which is the result of being called a "plug" by a fellow who sits secure in an office a hundred miles away. What reckless bravery we sometimes manifest under such circumstances, and how few of us are as courteous and patient in our intercourse over the wire as we would be if we stood face to face.

The smallest man among us will talk in an abusive and provoking manner to the operator at the other end, although he knows that the latter weighs fifty pounds more than he does, and is practically versed in the science of self defense. It is so easy a thing to call another operator a "plug" if he breaks too often for our pleasure, and it comes so natural to express ourselves in terms of biting sarcasm when he avers again and again that our writing "don't come," "it sticks," etc. Thus operators have their feelings of friendship or enmity for other operators whom they may work with, and have never seen. Let them meet face to face, and their opinions may undergo a radical change. The impatient operator whose actions over the wire seem to indicate that he believes himself to be the only "first-class man" in the business, may be a really good-hearted fellow when you meet him, will treat you well, and wouldn't insult you for the world. It is only over the wire that certain weak points in his character show themselves, it is only distance that makes him bravely aggressive.

But aside from the question of principle, it is bad policy to insult another operator, however distant he may be. Generally, his anger fades away before he can reach you, but occasionally the "lamp holds out to burn, and the vilest sinner may return" by the next train to demand and get satisfaction. Once upon a time the writer of this article, after laboring at the transmission of a message for about half an hour, under circumstances of considerable aggravation, was tempted to call the receiving operator a "blockhead." It was a very injudicious thing to do, but, even as highly excited as I was, as a measure of possible safety, the offending epithet was written at a remarkably high rate of speed, so that an embryo artist could scarcely be expected to catch the meaning; but he did catch it, and took the next train (a street car) for the writer's

palatial office. He entered unannounced, explained his business, demanded and received satisfaction, in what manner or to what extent the deponent doth not state, but to the best of his knowledge and belief he has never called any one a "blockhead" since. Moral—but I haven't room for a moral just here, I have already digressed from the subject first alluded to, and must return to it before being called to order.

Do operators ever live to become old, gray-haired, and respectfully venerable? If not, why not; if so, how much? I prefer to call your attention to the subject in this interrogatory manner, partly because it is so much easier to ask questions than to satisfactorily answer them, and partly because it gives each reader a chance to offer his own solution of the problem in his own manner, and consequently to his own satisfaction. Now, do not attempt to annihilate the subject at once by a declaration that if there are no old men or venerable women in the business, it is simply because the art of telegraphy has not itself attained to such an age as to permit any of its votaries to grow old in the service. Several better reasons than that can be given. For instance, there is an old saying that "Whom the gods love die young." Now, if the affections of the old heathen deities for certain favored mortals continues to be as unhealthily in its effect as it was in the good old times, why we need not go further for an answer to the question. If you wish to account for the scarcity of old folks in the telegraphic profession upon the strength of that fallacious theory you will appeal very powerfully to our vanity; but various circumstances will compel us to admit that this is not the true solution. Indeed, there is a certain danger in the advancement of such a theory that should make it a criminal offense to uphold it, because, if we should become impressed with the belief that we are a trifle too good for this world in our present condition, and should make an effort at regeneration so as to obtain a new lease of life, why the result is too terrible to contemplate. Another and a sensible theory presents itself in this connection. As a rule, there is not much hope for advancement, pecuniarily and otherwise, held out to the telegraph operator. After years of hard work he may obtain that which he has been earning for a long time, a fair salary. After a few more years of hard work he may attain to the management of a metropolitan office, and occasionally a practical operator is made a division superintendent. But these positions are so few in number, that the possibility of filling them at some remote period is never seriously thought of by the majority, and the idea fails to stimulate the ambition of the most sanguine. And so it is that the majority of operators work on in the hope of getting into some other business that will at least afford them more personal freedom, and possibly be beneficial from a financial point of view. Many eventually succeed, if their ambition be it not entirely extinguished by the corporation employing them, because an operator is not supposed to indulge in such a luxury, and therefore there is a possibility that in your search for the oldest veterans of the service you must look for them in the banks, the counting houses, and in positions of trust, where honesty is more highly appreciated even than skillful fingers, or in the editorial room, where the brain is king.

It is true that operators who leave the key hoping to better their condition at something else frequently come back to their first love, but rather from necessity than choice, although it cannot be denied that there is a certain fascination to a man in the click of the sounder, whose brass tongue speaks to him language that is unintelligible to others. But it is not the same as the fascination which the sea possesses for the sailor, too often unfitting him for success in any other branch of usefulness; on the contrary, the telegraph operator undergoes an apprenticeship which in many ways prepares him to fill more acceptably some other position in life, attaining which he is not likely to look back regretfully, and sigh for the return of the long hours and the close confinement of the busy office.

Perhaps as a class we are more highly appreciated here on the Pacific coast than in the East, not, of course, by the company for which we work, but by the outside world. More than one operator can be found acting as justice of the peace in the country town where his lot is cast. Others occupy important county positions, occasionally one is found who fills the editorial chair, and I believe a knight of the key is one of the delegates now at Sacramento manufacturing a brand new constitution. This said delegate has, aside from his general responsibility, a special obligation imposed upon him,

by his constituents of the craft, requiring him to have inserted in the new collection of laws, a clause recognizing the telegraph operator as one of the most useful and indispensable members of society, whose salary should be as munificent as that of any official in the State, and whose most luxurious demands should be unhesitatingly gratified. Of course, he will do all this, for he was elected on the workman's ticket, and you know that one of the primary rules of that party is, that whosoever faileth to do the will of his constituents, shall be banged by the neck until he is acquiescent or dead. A rather unpleasant alternative, I admit, but then we also have a by-law providing that in such cases the defunct shall be laid under a handsome monument, and have his epitaph written by "Werner," "Samson," or some other shining light of the fraternity. This, in connection with the eulogistic obituaries which invariably appear in the papers here when a Californian dies, will doubtless reconcile him to his fate if he should fail in his glorious mission.

Still it may be necessary to state for the benefit of those who think seriously of coming to California for the purpose of running for Congress or something of that sort, that the above cases are exceptions, and that the newly-arrived operator from the East who hangs around here for a few months in the vain hope that a grateful company will fulfill its promise to him by providing him with a sinecure position, in which his principal duty will be to draw his salary once a month with scrupulous fidelity, is frequently deceived. Indeed, I believe I do not exaggerate when I say that before he is requested by a deputation of workmen with tears in their eyes to be their candidate for the Legislature, and thus save the country from irrevocable ruin, there is a slight possibility that he will be reduced to the necessity of filling a humble position in a cheap restaurant, or of wrapping up codfish and running errands for a corner grocery. And then, in recounting his misfortunes to an appreciative audience over a glass of the nectar that is yelet beer, he will long once more for the click of the instrument, and the munificent salary of the olden time, and exclaim, with tragic emphasis: "To what base uses may we come, Horatio!"

Telegraphic business has been lively here for two or three months past on account of the excitement in the stock market. Between six and seven hundred messages have been exchanged daily with Virginia City, the great mining centre, during a part of that time, while business on the Overland circuits with Salt Lake has also considerably increased. During the evenings press report is received direct from Chicago, this probably being the longest overland circuit practically worked in the world. But there has been no serious want of wires or operators experienced at any time.

"Jake" Smith, a well-known operator at Los Angeles, after an absence of two or three weeks from the office on account of ill health, died at that place last week. His death was a shock to his many friends and acquaintances, who did not anticipate a fatal termination of his illness, and it seems sadder from the fact that he had but recently been married. He was another victim of consumption.

Among the new additions to the regular force here are Messrs. Riehl, Sherer, and O'Reilly, formerly of Chicago, Philadelphia, and New York, respectively, not to mention other cities where their lots may have been temporarily cast. Ned Reese, an old timer, is now at Aurora, Nevada, having discovered some attraction in the country which the city does not afford. We miss him, and his sketches in silhouette which he used to produce in idle moments.

DAMON.

SAN FRANCISCO, CAL., October 14th.

The cable brings over the news that holders of gas stock in England are panic-stricken by the news of Edison's recent improvements on the electric light. Thus electricity flashes under the ocean to chronicle the success of electricity. If the stolid old English gas stockholders are frightened, what do those of America think? There is not the slightest doubt that gas is doomed, and that much sooner than was generally supposed. If the electric light is as great a success at Menlo Park as those who have seen it say it is, there is no question but electricity will light Detroit before a year is past at a cost much less than petroleum. America is progressive. Detroit had the telephone in use as soon as New York and before Philadelphia, and if Boston is lit by electricity it will not be a month before the same light illuminates Denver. These facts must give small comfort to any who are so unfortunate as to hold gas stock.—*Detroit Free Press.*

Lightning Flashes.

As this issue of THE OPERATOR will be read by a large number of non-subscribers who may be anxious to know something concerning the book of which the Harrisburgh Independent said: "We do not know that we ever opened a volume that promised more genuine or wholesome entertainment, or that in the reading of which so fully realized our expectations, as did these 'Lightning Flashes,'" the following synopsis of an able review of the book by "Werner" may not be ill-timed:

If the theory be true that our writings are the reflex of our character, the student of our manners and customs, living a telegraphic generation hence, will have a rich and varied store from which to extract his information. In comparing our representative journal, THE OPERATOR, with any of the publications written and issued by collegians at the various Universities—with their antiquated jokes and bungled-up Greek sandwiched between lumbering phrases—the vast superiority of the ever-bubbling fountain of rough but true genius over the hard-pumped and creaking handle of mere scholarship is at once apparent. We, as a distinct class, are making ourselves heard, not only over this continent, but in Europe and Australia, as is shown by the flattering foreign notices of the last book issued by our profession—John Oakum's excellent work.

A well-spring is not to be dried up by the extraction of a bucketful, hence no one is surprised at the announcement of a new book written and published by practical telegraphers. "Lightning Flashes" bears every indication of having been prepared with the greatest care and regardless of expense. The paper is of fine texture, the binding heavy and substantial and very pretty, while the profusion of illustrations—particularly the artistic productions of Mr. J. J. Calahan—are equal to the efforts of the Frosts, the Morgans, and the Nasts of the outside world. It is also a refreshing sight to see so many brilliant names appended as contributors, including that of the eminent historian, Dr. Lossing, and so many names which will be familiar to the fraternity at large.

As it is not instruction so much as recreation that a hard-worked body of people need, stories written exclusively with the latter purpose would be quite sufficient; but when both objects are embraced, as in this case, it is so much the better. The story-telling is led off by an extravagant piece called "The Volcanograph," which, although a pleasant absurdity, it is not safe, in these days of wonderful inventions, to scoff at. Following this is a "Leaf of Autobiography," by Mr. Walter P. Phillips, the leader of what may now be called our school of "reflective" writers. Mr. Sanderson, of the *Plantation Harbinger*, an earnest exponent of the well-known "sweet oil" process, will give many of our needy brethren a valuable lesson in financiering. His volubility is about equal to Tip McClosky's, and his promises are worth, anyhow, as much as old Jim Lawless'; while the excellence of John Oakum's former productions will vouch for the able manner in which Mr. Sanderson will turn these qualifications to account. There is also, further on in the book, another of this popular author's essays, called "An Evening Reverie."

Ralph W. Pope presents a very interesting specimen of the many thrilling incidents which are always, at some time or other, peculiarly our lot as telegraphers. The interest awakened by reading "£1,000 Reward—my Foot Race with a Telegram," never flags from beginning to end, while the excellence of diction and free flow of thought is vouched for by a bare mention of the author's name.

There is an excellent love story by Charles Barnard, editor of "World's Work," *Scribner's Monthly*. Mr. Barnard's production is called "Kate," and is accompanied by four first-class illustrations. The description of engine No. 59 and John Mills, its driver, is a masterly description of the sympathy existing between the animate and inanimate, while the technical knowledge and pure English composition introduced is very fine.

"Some Grave Thoughts," a fine soliloquy, by W. J. Johnston, which attracted considerable attention in a recent issue of THE OPERATOR, is republished in the book. "A Centennial Telegraphic Romance," also by Mr. Johnston, abounds in lively sayings and romantic incidents. Young men who are in the habit of calling on their fair charmers at their homes, and are compelled to waste the evening in talking politics with her "old gentleman," or in vain endeavors to prove to the stubborn parents that all old folks ought to retire to bed every evening at 7-15, will find that this story meets their views exactly. To the married ones it will bring recollections of pleasant escapades almost forgotten.

Chops' "Carnival of Oshkosh" is given complete

in the book, with three excellent full page illustrations by Mr. Calahan. Oney Gagin gives an interesting account of the trials and tribulations of his brother Leander as a political investigator. Nuf Ced follows with a charming little love story, "Wives for Two, or Joe's Little Joke." Ruddy contributes a story of early telegraphic life in Connecticut; George H. Bliss, of Chicago, has two excellent little western sketches, "Scrapes," and "Snags." The Pacific Coast is represented by a story from the pen of J. A. Clipping, author of "The Pedagogue of Widow's Gulch." England sends in her mite in the shape of a thrilling and very interesting story entitled "Perilous Christmas Courtship, or Dangerous Telegraphy," by the author of "Was She Wrong," published some time ago in THE OPERATOR. The original and imitable Yosef relates in queer Dutch phrases his "Oxperiences mit a Railroad." After hiring himself out as a first-class railroad man, he receives his first train order by wire, to flag and hold a certain train, and, after innumerable breaks, the dispatcher drums it into Yosef's head that he is to display a flag as a signal for the rapidly approaching train to stop. Yosef, who is "putty vell oxited" by the novelty of the situation, looks on in mute astonishment as the said train whirls at full speed past his waving flag, the engineer merely calling out to Yosef to "Hoald der Fort," but showing no disposition to stop. His "oxited" explanation to the dispatcher, by wire, is a side-splitting narrative; and when asked by that official whether he used a green, a red, or a white flag, his innocent reply, "No, der American flack!" is uproariously funny. Yosef is always at home as a philosopher, and his concluding remark, on finding himself unable to adjust for the concluding sarcastical remarks of the dispatcher—not to speak of the fate of the train that went by—is a good illustration of the working of our cheap labor system: "So I cuts me owet, and putty soon I skint owet mine-selof, unt I doant vas hearet of in doze barts zin."

As an antithesis to Yosef's style is "The Telegraph Dispatch; a story of telegraphy in the early days," by Mr. J. D. Reid. This affecting sketch, in the cultured and refined style of its well-known and popular author, conveys a wholesome lesson to both patrons and employees of the telegraph.

"The privilege of enlightening us on the subject of our early history has been ceded to a non-telegrapher, Benson J. Lossing, LL.D., but the subject, 'Professor Morse and the Telegraph,' is admirably treated. The historian introduces us to S. F. B. Morse at the age of 19, and in his peculiarly able manner reviews the immortal professor's life. There are many illustrations in this article, including the first recording instrument, Morse's home at Poughkeepsie; and his portrait. The entire article is exceedingly interesting to telegraphers, and at the present day, when war is proclaimed, treaties are ratified and death sentences commuted by telegraph, we can afford to smile at the old-fashioned way of doing business only thirty-three years ago, as recorded by Dr. Lossing: "The first public messages sent were a notice to Silas Wright, in Washington, of his nomination to the office of Vice-President of the United States by the Democratic Convention, then (May, 1841), in session in Baltimore, and his response declining it. Hon. Henrick B. Wright, in a letter to the author of this sketch, says: 'As the presiding officer of the body, I read the dispatch; but so incredulous were the members as to the authority of the evidence before them, that the Convention adjourned over to the following day, to await the report of a committee sent over to Washington to get reliable information on the subject.'"

The New York Wire Club.

Old Time and I the other night,
Had a carouse together;
The wine was golden, warm, and bright—
Ay! just like summer weather.

Prolonged applause greeted the appearance of Mr. Bogardus upon the platform, Supt. Weller calling for three cheers, which were cordially given. The distinguished guest advanced to the railing, and tendered his sincere and hearty thanks for the kind reception. He was proceeding to relate some interesting reminiscences, when Mr. Weller called for more cheers, but was severely reprimanded by President Boerst, who said that he was much entertained by the graphic delineations of Mr. Bogardus.

Percy Jones denied that he was opposed to lady operators. A beautiful young lady mingling in the city's strife and sound, reminded him, he said, of a dewdrop in an ocean. (Applause.) Morris Brick spoke briefly on the question of capital and labor.

He believed with Col. Ingersoll, "that every locomotive, every press, and every telegraph is a missionary of science, and an apostle of progress, and that every schoolhouse is a temple." (loud applause.)

A. J. Pattison having been introduced by the President, announced that he was going West to join "Bif" Cooke, Joe Wood, and others who had glorified our annals. Mr. Pattison claimed that during his official career as Assistant Mechanical Engineer he had rarely used the iron hand of authority, and that when he had done so it was covered with a glove of velvet (voices; no! no! and confusion.) He asserted that this was a memorable day in his life, adding, As Dickens says: "Pause and think for a moment of the long chain of iron or gold, of thorns or flowers, that would never have bound you, but for the formation of the first link on one memorable day." (applause.) The speaker in bidding the members good-bye assured them that he should long cherish recollections of the Wire Club, the worth of which time could never destroy.

David Mitchell said that the departure of Mr. Pattison recalled to his memory those graceful lines of Tom Moore:

Though many a gifted mind we meet,
Though fairest forms we see,
To live with them is far less sweet,
Than to remember thee."

The meeting was then dismissed.

PERSONALS.

Pete Weitz, an old timer, is working for the A. V. R. R. Co., at Scrubgrass, Pa.

Wm. Fraas, lately with the Pennsylvania railroad, is working for the United Pipe Line Co., at Duke Center, Pa.

Charles A. Wood, formerly of the "Hoosac Tunnel Line," is working at Casey, Iowa, on the Omaha Division Chicago, Rock Island and Pacific R. R.

H. A. Bray, operator for the D. L. and W. R. R., Hoboken, N. J., has been spending a couple of weeks' vacation with his brother in Greensburg, Pa.

Mr. J. L. Kerr, having left Toronto, Mr. J. B. Moore, cashier Dominion Tel. Co., will hereafter act as agent for THE OPERATOR on the Dominion lines.

Mr. E. G. Delanoy, late of Thirty-third Street Freight Depot N. Y. C. & H. R. R. Co., has been transferred to Superintendent's office, Grand Central Depot, this city.

There are over thirty telegraph towers on the Pittsburg division of the Pennsylvania railroad, with day and night operators employed at each tower; from one to three students are also constantly on hand to keep the market supplied.

B. F. Taylor, of Lafourche, La., has been appointed manager of the office in the Jackson R. R. Depot at New Orleans vice J. B. Hunter, resigned to accept the managements of Holly Springs, Miss. W. S. Hunter has gone to Grand Junction to take charge of the R. R. & W. U. offices at that place.

The powers that be at the W. U. office at St. Louis created an all-night chieftainship, and Mr. Ed. L. Parmelee, having been introduced to the switchboard and armed with a Railway Guide, was left to find out his other troubles. It is hoped that the appointment of Mr. Parmelee will prove as satisfactory to the company as it is gratifying to his friends.

The N. J. and N. Y. & Oswego Midland Railroad wires were turned over to the W. U. Co. October 1st. Supt. W. J. Holmes takes charge of the N. J. Midland Railway lines between New York and Middletown. Wm. H. Weed, late superintendent of these wires for the A. & P. Co., has been appointed superintendent by the W. U. Co. between Middletown and Oswego and Montreal.

CLEVELAND, T. V. & W. RAILWAY.—V. H. Bell (Major), Cleveland, is superintendent telegraph, with Mr. Mitchell as assistant; W. J. Frink is at Black River, H. M. Carpenter at Elyria, S. W. Belding and Frank B. Gee at Grafton, J. V. Burke at Belden, C. R. Sanborn at Elyria, W. D. Martin, an old timer, at York, J. B. Whinnay at Medina, Z. D. Ellis at Seville, D. W. Garver at Russell, L. F. Taft at Easton, I. D. Campbell at Fulton, J. H. Sladden at Massillon.

Mr. Fred G. Mann, a well-known operator of East Saginaw, Mich., died in that city October 25th, aged twenty-five years, and was buried on the 28th. A large number of operators from a distance attended the funeral, but many more, it is said, would have attended had Assistant Superintendent

Corbett conceded the usual courtesy of free passes. "From the comments made by the operators upon this meanness," says the East Saginaw Herald, referring to the matter, "we were led to infer that Corbett's funeral would not call out volunteers enough from the whole Western Union force to give him a decent burial."

J. M. & I. R. R.—A. L. Eggleston is chief at Jeffersonville, with Thomas White as night assistant. Miss Aida L. Hollister is at "Mh," and M. Guernsey at Henryville. O. L. Guernsey is at Scottsburg, J. W. Stratton at Austin, the handsome Ira C. Parker at Crothersville, J. S. Mills, an old-timer, and Charlie McGill at Seymour; J. L. Perry at Jonesville, D. Austin, Ed. Lane, and Ph. Wilk at Columbus; W. V. Troutman at Edinburgh, D. Wilson at Greenwood, George Swain, Joe Wensley, F. B. Goghegan, and F. S. Wensley at Indianapolis Belt Railroad Junction. Lu Guernsey is relief operator. Miss Johnson is the only lady in the Indianapolis city office.

LARAMIE DIVISION M. P. R. R.—Mr. J. A. Edson is chief operator and train dispatcher, and Mr. Borie assistant. R. W. Baxter, manager at Laramie, still continues to rush the boys. A. J. Bowle has just returned from a six weeks' visit in the East. Mr. Levy, at Point of Rocks, is a happy father. F. H. Eaton, at Rock Springs, still has the name of being "the best boy on the line." D. C. Chase has gone East, and we expect "cards" from him before long. F. B. Carly is now agent at Miser. H. E. Flayin is manager at Rawlins, with W. H. Hoyes nights. Mr. Sherron is now nocturnal manager at Red Desert. Mr. Whipples, a new man, is doing good work with Government biz at Fort Steele. Everybody takes THE OPERATOR, and all we have talked with are in favor of a protective organization. Wyo.

OMAHA.—George M. Myers of "U" office, is rapidly regaining the weight which he lost in his tussle with the typhus, but his hair is of a much slower growth. George M. O'Brien who was also on the sick list, is around again. Frank King, who for some time past has had charge of A. & P. wires in "Om," resigned last week on account of his health. Mr. Patterson has taken his place. Charley Stone still grows fat, and tips the beam at twenty stone. Frank Williams is happy, and the smiles which illumine his countenance when you ask about "that boy" puts the sun in the shade by their brilliancy. Griffith, the "pretty boy" is still with us, he and Williams did not go to Southern Nebraska as formerly intended. Drake is happy. Fisher, Gardanier, McNevin, "the fast," Mayne, Cunningham, and all the others are well and doing well. Sam J. Ritchie, assistant chief operator, who has in spite of his illness stood at his post, was compelled to ask for relief the other night, but we notice him back again. Sam has lots of "pluck." Leonard Hohl is hohl-ding forth at "Rh" as second dispatcher.

MILWAUKEE, Wis.—Eddie Patterson and Fred Parker, both Madison chaps, who have been out husking corn for some time past, hold down their respective chairs once more. Mr. E. J. Peabody, manager of the American District Telegraph Co., was married October 16th. Several of the boys are counting the cost, evidently contemplating a similar step. Pete Connor is taking night report at La Crosse. Everybody who knows Pete will testify that he's a good operator and a jolly boy. Bill Hall is manager of the Green Bay office. Miss Ella Donley is spending the winter at Palmyra. Boss, of Madison, walked through the operating room last week, and indulged in a little hand shaking. Barker makes a very efficient night chief. A. S. Wilson, formerly operator at Hartford, Wis., is now doing good work in Minneapolis. He's one of the best boys within 350 miles of here. Plum Rogers, chief operator at Minneapolis, drives a 2.40 horse; a pleasant time is predicted for any operator who visits Plum. We speak from experience. Ed. Hughes, Gridley, Cargill, Collett, Anderson, Davidson, and Doyle, do business for the Northwestern in St. Paul. No where this side of the yellow fever district can a better crowd of knights be found.

A CORRESPONDENT, who seems, by the way, to have slightly misunderstood our remarks in last issue in reference to a new king having arisen in the administration of the Western Union Company—President Green not being the king referred to—says:

I know that the employees of the Company have cause to congratulate themselves upon the election of Dr. Green as President, and Gen. John Van Horne as Vice President. I know them to be high-minded, noble and generous. Ask the old operators who worked for them when they controlled the

Southwestern Telegraph Co.; those who worked in the Southern Division of the W. U. Co.; and lastly, those who have worked South during the yellow fever scourge, what their opinion is. I have known them many years as leading telegraph officials, and can assure the employees of the Company that they will have no cause to regret that "A new king has arisen." Long live the "king!" as you are pleased to call the new President. May he cause the heart of every employe to rejoice by his kindness and goodness to them, is the wish of. MORDECAI.

JOHN F. ALLEN, manager of the Sacramento Western Union office, was arrested in that city October 19th on rather a novel charge. It appears that one F. S. Williams, an operator at Sacramento, was discharged without cause, except a disagreement between himself and the manager. Mr. Williams, believing that he had been wrongfully discharged, appealed the case to General Superintendent Gamble, and in the course of his correspondence, sent a telegram to Mr. Gamble, for which he paid \$1.10. When Williams called at the telegraph office to receive an answer, he found that the dispatch had not been forwarded, and the amount paid for transmission was tendered him. This he refused, and had Mr. Allen arrested on a criminal charge of misdemeanor, and also brought a civil action for \$10,000 against Allen, as manager of the Western Union Telegraph Company. The criminal charge is based on section 638 of the Penal Code, which reads as follows: "Every agent, operator, or employe of any telegraph office, who willfully refuses or neglects to send any message received at such office for transmission, or willfully postpones the same out of its order, or willfully refuses or neglects to deliver any message received by telegraph, is guilty of a misdemeanor. Nothing herein contained shall be construed to require any message to be received, transmitted, or delivered, unless the charges thereon have been paid or tendered, nor to require the sending, receiving, or delivery of any message counseling, aiding, abetting, or encouraging treason against the Government of the United States or of this State, or other resistance to the lawful authority, or any message calculated to further any fraudulent plan or purpose, or to instigate or encourage the perpetration of any unlawful act, or to facilitate the escape of any criminal or person accused of crime."

Allen was released on bail pending trial, and says he will defend the suit. He is said to be universally unpopular on the Pacific Coast, and all the operators there heartily wish Williams success.

MARRIAGES.

BEALE—TOWNSEND.—Oct. 15th, at Boston, Mr. George A. Beale, manager Western Union Telegraph office, Richmond, Me., to Miss Hattie E. Townsend, of Brunswick, Me.

FLEMING—NICHOLS.—September 18, at Detroit, Mich., Mr. S. A. Fleming, agent and operator, C. and M. L. S. R'y, to Miss Ida M. Nichols, both of Alletton, Newaway county, Michigan.

GARDNER—SIMPSON.—Oct. 9, at the residence of the bride's parents, Great Bend Village, Pa., by the Rev. R. N. Foess, Mr. F. A. Gardner, Forks Station, D. L. and W. R. R., to Miss Lizzie Simpson.

MARTIN—WOLREW.—October 14th, at the residence of the bride's parents, Jersey City, by Rev. S. M. Rice, D. D., W. J. Martin, operator and clerk, N. J. Midland R'y, this city, to Henrietta G. Wolrew, Jersey City.

DEATHS.

GREGG.—October 27, at Shelburn, Vt., of consumption, Fred L. Gregg, formerly with the W. U. Tel. Co., and Central Vermont R. R., at Brandon, Va., aged twenty years and five months.

BIRTHS.

October 26, 1878, to Joseph Christie, of the Associated Press Office, Philadelphia, a son.

October 19, to George Bosworth, manager W. U. Telegraph office, Colorado Springs, a daughter.

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Opinions of the Press on "Lightning Flashes."

"Lightning Flashes," says the Glen Falls, N. Y., *Republican*, "is a *mélange* of history, poetry, narrative, humor, fun, wit, wisdom, profusely illustrated, and contains an interesting summary of the leading features in the life of Samuel F. B. Morse, inventor of the electric telegraph, including his earliest efforts, trials, and subsequent success."

"Lightning Flashes and Electric Dashes" is fairly entitled to be styled *unique*, and reflects great credit upon all concerned in its production. Everything in the work is thoroughly telegraphic and highly amusing, the cartoons are cleverly executed, the narratives pithily and in parts brilliantly worded, while the variety supplied will make it difficult for any who may have the privilege of reading the book to do so without enjoyment. We heartily recommend the work to our brother telegraphists."—*London Telegraphist*.

The N. Y. *Tribune* says: "Lightning Flashes" is an interesting collection of anecdotes and adventures peculiar to telegraphic experience. Few occupations are so well calculated to furnish material for mirth as telegraphing. It offers such wide scope for the exercise of personal peculiarities on the part of those who invoke its aid, and its extensive range, including all sorts of people, incidents of a peculiar and amusing character are of frequent occurrence, the nature of which is well set forth in this entertaining volume. The book is written in a bright and sparkling style, and the numerous illustrations lend an additional interest to the work, which we have no doubt will meet with an extended sale."

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"Listen, my children, and you shall hear
Of the midnight ride of Paul Revere."



"There, in his noisy mansion, skilled to rule
The village master taught his little school."



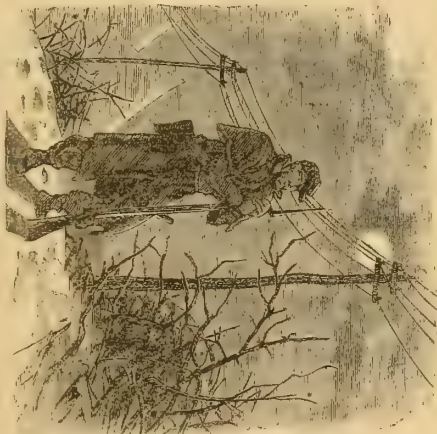
"We march in the van of the army that rolls to the far-away field,
And our banners glow with the presence of the God who strikes for the right—"

SOME OF THE ENGRAVINGS IN

CHRISTMAS
EVERGREENS



"And out of that frozen mist the snow
In waveren g flakes begins to flow:
They sink in the dark and silent lake."



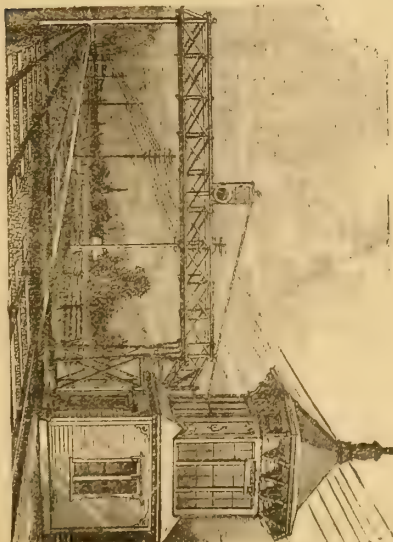
"Past the pickets that sternly stand, each on his lonely post,
While the moonbeam shimmers on the tents above the sleeping host."



"How the farmers gave them hall for ball,
From behind each fence and farm-yard wall."



"The breezy covert of the warbling grove,
That only sheltered thrife of harmless love."



"We watch all night the rattling trains, when the sleepless sounder clicks
A caution for Number Seven past to wait for Number Six."

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- "PAUL REVERE'S RIDE," by HENRY WADSWORTH LONGFELLOW, with six illustrations.
- "THE DESERTED VILLAGE," by OLIVER GOLDSMITH, with an Introduction and eight illustrations.
- "OH, WHY SHOULD THE SPIRIT OF MORTAL BE PROUD?" (Mr. Lincoln's favorite poem), by WILLIAM KNOX.
- "THE TELEPHONE," by B. F. TAYLOR, with three illustrations.
- "THE SNOW SHOWER," by WILLIAM CULLEN BRYANT.
- "THE CHRISTMAS TREE," by J. C. SHERER.
- "THE TELEGRAM," by SARAH E. HENSHAW.
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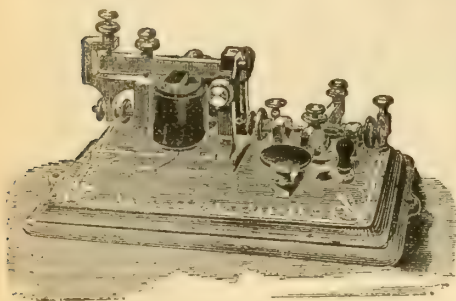
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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

November 15th, 1878.

Volume IX.

Whole No. 114.

"Bill Redding."

DIED OF YELLOW FEVER AT GRANADA, MISS., SEPT. 1st, 1878.

The following poem was suggested by reading in THE OPERATOR of Sept. 15th the notice of the death of W. M. Redding, at Granada.

Granada, stricken city of the South,
In sackcloth clothed—among thy silent tombs,
Thou city of the dead, Mausoleum,
Of broken hearts and desolate homes

Weep o'er thy graves, Thy bitter tears
Shall nourish flowers above them strewn,
But he who lies here is not dead.
He lives forever—all our own.

His is a name for future years—
Poetic immortality;
"One of the few heroic names
That were not born on earth to die."

Fashioned of more than common clay,
Drawing a more celestial breath
Than we—he spent it silently
In battle—face to face—with death.

Granada, deck thy hero's couch
With all thy fragrant tropic bloom,
Plant cypress elsewhere, if you will,
But *Amaranth* above this tomb.

Finished and full the life he lived—
Completed in its broadest plan,
He died—the noblest death of all,
Died for his suffering fellow man.

No shaft is needed o'er his dust—
No tears on his low dwelling shed—
To loving hearts his name is left,
Safe from the living and the dead.

CINCINNATI, OHIO, October 14, 1878.

Recollections of Some of Yellow Jack's Victims.

While the writer was traversing the South, a few months ago, the late Fred B. Moxon was sending the Texas night report on the Gulf wire from New Orleans.

Perhaps no telegrapher in the South had the reputation of Moxon; a matchless sender, an excellent receiver, temperate, gentlemanly, and agreeable in every way, it soon became the rage to know Moxon.

This was especially true in Texas and Louisiana; and from the few first-class men down to the peripatetic plug in the morasses of Louisiana, and the "bad men" of Texas wilds, not one solitary operator could be found who was not intimately acquainted with Moxon.

His good nature was proverbial. An incident coming under the writer's notice at Houston, Texas, will illustrate:

One night the St. Louis wires were down, and the way the Eastern business came piling over the Gulf wire into Texas was enough to paralyze Kettles himself. Spanish ciphers, Mexican cables, blacks, reds, and stacks of report sheets were hanging around "thicker than Johnny McNabb's head!" as Fred observed.

Hank Stansberry at Houston was getting black in the face gathering in so many messages "all at once." Geo. Hurd and his Northern friend were passing the rapidly-increasing business out through Texas. Patsy Ayers (the only "Patsy") was holding down the Vicksburg end, and Johnny McNabb was at Galveston.

About 10 p. m. Stan., suddenly becoming very hungry, slipped out, leaving Hurd to "take a few." Five, ten, fifteen minutes elapsed, when Hurd suddenly arose, saying: "Here, —, sit down a minute till I skip out and get Stan." And away sped the blonde, leaving the Northern vic-

tim face to face with the redoubtable Moxon. Their victim became tired in less than a minute, and opening the key dashed madly after the "famished report men."

After a twenty minutes search the boys were found discussing the situation at the "Imperial."

"Well," said a familiar voice, "here's hoping his nibs gets Moxon broke up;" and two familiar forms were seen standing idly in front of the counter admiring the flickering gas jet through the bottom of a suspicious looking glass.

"If that stuff don't kill you, New Orleans will," angrily exclaimed their friend, "for the Gulf wire has been open half an hour now!"

The boys turned pale, and, with muttered exclamations, were quickly back in the office, and rapidly explained their *flasco* to Moxon. It was enough to make a saint mad, but Moxon laughingly replied: "Bet you forgot to settle?" and turning to Vicksburg suggested to Patsy: "Better get your bite now, eh?" Vicksburg mumbled something about "no receipts," "no stand-off," and slipped out for fifteen minutes. By this time it was 11 o'clock, and Moxon, literally swamped with business, was on his mettle. The boys, however, be it said to their credit, received the business steadily from New Orleans until 3 a. m., when the ever-welcome "30, 30; Qa, Qa; 'E, N. O.," came spinning along, and the hooks were clear.

This was Moxon's last night at that office until the writer returned home, for he was officially decapitated next day "to reduce the force," as the officials said. It was openly asserted, however, that his independence and popularity among the fraternity, together with his well-known sympathy for the proposed league, were the only causes of his dismissal.

When asked his intentions by one of the boys in Houston, he jokingly replied: "Oh, I'll sub around here until Yellow Jack frightens the boys North, then they will want me."

Alas, Poor Fred! His joking words proved a sad reality. He was wanted by the Western Union Company as soon as the fever frightened Paul Bossart away to New York; and Moxon, so young, so accomplished, and so well beloved, was the first telegrapher in New Orleans to be cut down by the plague.

Manager E. W. Barnes soon followed Moxon. His was indeed a stricken household; and out of a family of ten persons, it is said that only two survive. Chief Operator Hugh Irvine and Willis K. Woolf were also early victims. After a long struggle, operators A. D. Babbitt, Horace H. Hunt, and J. J. McDermott, were attacked. Babbitt died October 16th, while Hunt and McDermott lingered until October 23d, both dying on that day. These three young men were well and favorably known throughout the country, being thorough gentlemen, as well as representative telegraphers in every particular.

Horace H. Hunt worked for several years in the Chicago office. In the spring of 1873 he resigned his position there, and, forming a partnership with his uncle, bought a paper mill in La Porte, Ind. After a few months' successful business, a disastrous fire consumed their entire manufactory, and, as there was no insurance, they abandoned their undertaking. This was a sad blow to Hunt, for in the disaster he lost his all. He at once resumed work in the Chicago office, and in a short time was transferred to New Orleans, where he remained up to the time of his demise. He was a professing Christian, and an active communicant of St. John's Episcopal Church.

Some time last September the daily papers contained the following telegraphic item from Vicksburg, Miss.:

"C. M. Carr, volunteer operator from St. Louis, died here to-day."

Carr was one of that class of our fraternity commonly termed a "tourist," or "tramp operator," and a history of his varied experiences would fill a volume.

Seven years ago Carr and the writer were employed of the Lake Shore and Michigan Southern road, working in the same office. Drifting apart, one entered the W. U., the other continuing in the railroad service. They met again in St. Louis

last June. Carr was then working the New Orleans wire in the St. Louis main office, with Babbitt at the southern end. He had apparently braced up, promised that he would be a man, and tramp it no more. But he slipped again and again, and finally became lost. The following characteristic postal was received the day he started for Vicksburg:

"DEAR OLD PARD.—For the 31st time, I am fired. Have to make a bluff at 'Yellow Jack' to get a job; start for Vicksburg to-night, and I feel that this trip does settle it. So good-bye, old boy, perhaps forever.
"C. M. C."

His forebodings were only too true—that trip to Vicksburg *did* settle it; and in C. M. Carr, volunteer operator from St. Louis, the insatiable fever found one of its easiest conquests. Poor old wanderer, home at last! May you rest in peace!
CLINTON, Iowa. B.

The Williams-Allen California Case.

We mentioned in last issue of the THE OPERATOR that John F. Allen, manager of the Western Union Telegraph office, at Sacramento, Cal., had been arrested at the instance of F. S. Williams, formerly an operator in the same office, on the charge of having suppressed a message from Williams to General Superintendent Gamble, the charges on which had been paid. The case came up for hearing at Sacramento, November 1st, before Justice Gilmer, Hon. Grove L. Johnson appearing for Williams, and Hon. Creed Haymond for Allen. This was the first case of the kind that is ever known to have arisen in California, and much interest was manifested in it, especially by telegraphers.

F. S. Williams testified that he delivered his message August 1, 1878, at the office of the company in Sacramento, and kept a copy of it. (Defendant was here called upon to produce the original message and did so.) Witness identified it, except that the check of payment was erased. He paid \$1.10 for the transmission of the message to the receiving clerk. He testified that Mr. Gamble had told him he had never received the message. Witness was not in the employment of the company August 1st. The money witness paid for the message, he testified, had not been returned to him. Mr. Brown, a clerk, told him it was to be returned to him. This was when he called to see if there was an answer. Brown tendered him the money on the evening of Aug. 1.

Defendant admitted, at this point, that the check of payment had been made on the message, but erased thereafter on return of the money being ordered, the message being treated as a free message. The message in question reads as follows:

SACRAMENTO, October 1, 1878—2:50 P. M.

To James Gamble, San Francisco: Mr. Allen offers as his ultimatum that Walther sign a letter of apology, without which he will have me blacklisted. Walther refuses to do this. He makes me suffer for Walther's action. Please answer.

33. F. S. WILLIAMS.

It bore the stamp of the General Superintendent, dated "August 2, received 1878."

Charles Pierson, an operator, testified that a record is kept of paid messages; but did not know if a record is kept of messages sent to the superintendent. Witness examined the Williams message, and could find no check on it. All free message manuscript is sent to San Francisco; but the originals of paid messages are kept in the Sacramento office.

Mr. Pray, an operator, testified: Did not send such a message as that of Williams'. It is customary, if Mr. Gamble is known to be at a different point than that to which a message to him is addressed, to forward it to the point where he is known to be.

David Strickland, check clerk, testified that the message came up in the dummy from the office below to the operating room. Soon after, it was called for from below, and was sent down in the dummy.

Michael Nelis, an operator, said he did not send the Williams message.

Mr. Dozier, chief operator, testified that on the 1st of August he received to send, and sent, to Jas. Gamble, from F. S. Williams, a message consisting of thirty-three words. He did not send it to San Francisco, but to Truckee, with orders to forward by mail to Yank's. There was an order to send Gamble's messages to any point where he may be on the date on which the message is sent. Mr. Allen gave the instructions for August 1st where to send Mr. Gamble's message. He gave the order to send the Williams message to Truckee, thence to be forwarded to Yank's by the usual means of communication. Mr. Allen gave the witness the message in a sealed envelope, with a request that he send it personally and then return it to him (Allen), that being

the custom with such dispatches. The marks on the dispatch, indorsed by witness, show it was sent to X. (operator's signal), and U. K. (Truckee), by D. (witness' signal), and that it was sent at 3:34 P.M., August 1, 1878, and received and acknowledged by X. at U. K. Witness testified that some two days before August 1st he met Mr. Gamble at the cars in Sacramento, and he told witness he was going up to the mountains and to send his messages to Truckee. The Williams' dispatch was sent as a free message; it bore no mark of payment.

F. S. Williams, recalled, testified that some two weeks after August 1st he met Mr. Gamble at the depot on his return from "Yank's," and he told witness that he left San Francisco August 1st, at 4 P. M., on the Vallejo train.

Mr. Brown testified that August 1st he was receiving clerk at the telegraph office; couldn't remember if he took in the Williams message, as he received so many; thought such a message came in about that time; Mr. Allen told him to refund the charges on such a message, witness having received the charges from Williams. Allen had not told witness not to remember about the dispatch. Witness enters upon a book messages received in part. Not all messages are entered. Free messages, he thought, are not entered, but are kept and the manuscript sent to the main office by mail.

Defense here admitted that Williams paid for the message but that the money was tendered back to Williams, that the message was sent as a free message, and that the check mark of payment was rubbed out.

Counsel for prosecution here admitted that if Mr. Gamble was at "Yank's" August 1st, and left orders to have his messages sent there, that the case would be ended and the defendant must be discharged; but claimed that if he was in San Francisco then defendant was guilty.

F. S. Williams, recalled, testified that he was an operator in the Sacramento office for two years and never knew of a custom by which Mr. Allen sealed up any messages in an envelope and gave to operators to send. Messages as they come in are numbered and put on a hook and sent in regular order. To hand a message to Allen first for him to put in an envelope would delay it, take it out of its order. Often messages have to wait when the wires are occupied.

Counsel for prosecution here stated that the whole case now hung upon the fact whether Mr. Gamble gave the order to have his messages forwarded to Truckee, and if so, that was an end of the case. An adjournment was therefore moved for until such time as the testimony of Mr. Gamble could be taken, he then being at Washington. The Court did not understand how Mr. Gamble could have been at "Yank's" August 1st, when the message bears his stamp as received in the superintendent's office August 2d. Counsel for the defendant explained that he would prove it to be the orders to forward the manuscript of all free messages to the superintendent's office, where, when received, they are stamped and filed away. The Court said then Mr. Gamble's testimony would be necessary, and adjourned the case by consent until November 25th.

Canadian Telegraphy.

IN THE OPERATOR of October 15th we gave the substance of a letter written by Mr. E. Wiman, of Messrs. Dun, Barlow & Co., published in the New York Times, in reference to the comparative telegraphic facilities of Canada and the United States. The letter possesses so much of interest to telegraphers that we now give it complete. The article which called it forth will be found in THE OPERATOR of September 15th:

The editorial on "International Telegraphy," which appeared in your edition of last Sunday, gave a wonderfully perfect view of the progress of this important element of civilization all over the world from the few figures at command. I venture, however, to draw your attention to the fact that in claiming for the United States, as compared with other countries, a superiority in telegraphic facilities, you did, unwittingly, injustice to our neighbors in Canada. Notwithstanding that in the Dominion the population is largely agricultural, the distances great, the country sparsely settled and not by any means rich, telegraphic interests have been so judiciously fostered and so sagaciously managed, that better service, cheaper rates, and greater facilities exist in the Dominion than even in the United States or elsewhere in the world. Permit me to give you some figures which justify this rather large

claim. First, as to the mileage of wire in proportion to population:

Country.	Population.	Miles of Wire.	Proportion to Population.
Great Britain.....	32,000,000	112,000	1 mile to 283
United States.....	40,000,000	267,000	1 mile to 150
Canada.....	4,000,000	30,000	1 mile to 133

The above figures are sufficiently suggestive, but as to the number of offices in operation the same comparison holds good:

Country.	Population.	No. of Offices.	Proportion to Persons.
Great Britain.....	32,000,000	5,375	1 office to 5,950
United States.....	40,000,000	7,500	1 office to 5,333
Canada.....	4,000,000	1,400	1 office to 2,857

It is claimed in your article that the Western Union Company has an office for every 5,333 inhabitants. Let it step aside—big as it is—and give place to the Montreal Telegraph Company, which affords one office for every 2,857 persons in its bailiwick.

Then, as to rates charged, it can be claimed that the Montreal Company has enabled Canada to make a step in advance of all other countries. What it took all the power of Parliament in Great Britain to accomplish, and what the wealth and executive ability of that great Government as yet fail to make profitable, the remote Province of Canada has demonstrated can be both effectually and profitably done, for it is a fact that a message can now be transmitted over the full extent of country covered by this Canadian company for 25 cents, and one cent for each additional word. From Sackville, New Brunswick—the eastern limit of the lines of this company—to Sandwich, the extreme western limit, is 1,200 miles, yet for this immense distance a message can be sent for 25 cents. The regular rate of 25 cents per message in England for all distances would average far less per mile in Canada, where the distances are greater, but as compared with the rates prevailing in the United States, the advantage in favor of Canada is very remarkable, as the following will illustrate:

Between	Distance in Miles.	Rate for Words.	Additional Word.
United States rate.....	New York and Bangor.....	500	\$0 50 3
Canada rate.....	Quebec and Toronto.....	500	25 1
United States rate.....	New York and Mobile.....	1,200	1 00 7
Canada rate.....	Sackville and Sandwich.....	1,200	25 1
United States rate.....	New York and Birmingham.....	170	35 2
Canada rate.....	Montreal and Quebec.....	150	25 1

In France and Germany the rates are much higher than in the United States, and nowhere, except in England, does the comparison of rates at all compare with the cheapness of the Canadian tariff. But even in England greater facilities are not afforded, for though 20 words can be transmitted for 20 cents, the charge over that number of words is 3 pence, or 6 cents, for every five words, while in Canada it is only one cent per word for each additional word. Again, in England there is no rate less than 25 cents, while in Canada between places 12 miles and under apart messages can be transmitted for 15 cents each. No rates so cheap as these exist elsewhere in the world.

But to show that these great facilities are afforded with a positive benefit to the company as well as to the people at large, I append some figures showing the capital stock, at different intervals, of the Montreal Telegraph Company, and the dividends paid:

	Capital.	Miles of Wire.	Cash Dividend.
1847.....	\$60,000	500	10 per cent.
1859.....	60,000	700	10 per cent.
1861.....	370,000	1,900	9 per cent.
1870.....	1,100,000	12,400	10 per cent.
1875.....	1,925,000	20,000	10 per cent.

It is but fair that the man who has achieved such success in a field so important should be known. Those familiar with the subject will not hesitate to say that Canada is more indebted for its cheap and effective telegraphy to Mr. H. P. Dwight, the Superintendent of the Montreal Company at Toronto, than to any other person. Sir Hugh Allen, the President of the Company, with his shrewd, far-seeing vision and quick appreciation of the demands of business, has always been ahead of the times in telegraphy as in navigation and in other material

progress, while Mr. O. S. Wood, in his time, and Mr. James Dakers, in his life-long connection, by their close attention to legitimate business, have kept the affairs of the company in a sound and prosperous condition. But none will more readily admit than these gentlemen themselves that Mr. Dwight has been mainly instrumental in the wonderful expansion and growth of the company. Stationed at Toronto, the central part of the most largely populated and most progressive portion of the Dominion, and with lines radiating in all directions, Mr. Dwight has had charge of the greater portion of the company's business, and under his steady, strong management the business has yielded the largest returns; facilities have increased, schemes for extension been perfected, and greater success achieved in his profession than can be shown anywhere else in the world. The facts adduced above, in addition to your article of Sunday last, justify, I think, this claim. E. WIMAN.

An Operator Arrested for Causing A Collision.

We regret to have to chronicle another railroad accident, accompanied by loss of life, caused by carelessness on the part of those entrusted with the handling of trains by telegraph. It has not been determined at this writing upon whom the culpability rests. Immediately after the accident, however, a telegraph operator named Alexander Hay was put under arrest to await the action of the coroner's jury.

It appears that on the morning of Oct. 31st, a regular freight train on the Grand Trunk railway left Toronto, Canada, on time. A special, also a freight, coming toward Toronto, arrived at Carleton Station, some five miles from Toronto, and, after receiving an order from Hay to meet the regular train at the latter named place, proceeded on its way, and the two trains came into collision a short distance outside of Toronto. The trainmen, with one exception, saved themselves by jumping. A brakeman, however, named Frederick Still, was standing on the top of the first car of the regular train when the crash came, and was thrown down among the wreck, receiving injuries from which he died the following evening.

The facts elicited at the coroner's inquest show that a serious misunderstanding must have taken place, as the dispatcher's order, and the one given to the conductor of the special by Hay, were widely different; one signifying that the trains should meet at Carleton, and the other, as above stated, at Toronto. The operators at two other stations on the line testified that they heard the order sent as claimed by the dispatcher, for the trains to meet at Carleton; while Hay, on the contrary, seems quite confident that the order he delivered was all right. A great deal of evidence was taken, but as the case is not yet concluded, we refrain from making any comments at present, any more than to protest against what we have always considered an error in railway management, viz.: making an operator, especially a night operator, as in this instance, perform the duties of agent, switchman, baggage-man, etc., in connection with, and in addition to his regular occupation. Here was this now unfortunate young man, with two trains at his station, and one approaching from each direction, compelled to leave his office at times, and attend to switches hundreds of yards from the station. To have properly attended to the switches alone at this particular time would have kept one man fully employed, yet there are hundreds of operators on the railroads of this country and Canada, who are placed in a similar position to that of Hay. When we also take into consideration the mere pittance for which these grinding corporations expect such labors to be performed, the wonder is that these accidents are so rare. Thirty dollars a month, the salary received by Hay, and, we might almost say, the average rate of compensation given to night railway operators, seems outrageous when compared with the responsibility assumed. We cannot conceive how skilled operators can be obtained at this figure, and it is here, especially, that the most skillful and accurate men in the business would seem to be required. Under the systems universally in vogue, the whole running arrangements of our railways—especially single track lines—are in the hands of the telegraph, dependent upon operators for their proper fulfilment; but, so long as poorly-paid and over-worked operators are intrusted with this duty, repetitions of the above calamity will occur.

Since writing the above, we learn that Hay has been discharged from custody, the evidence adduced not being conclusive enough to fasten the

blame upon any one individual. Great carelessness on the part of all concerned was brought to light. Orders were sent, of which no copies could be found. Conductors had failed to sign the books for orders they had received, and a reckless disregard of the rules and regulations of the company was manifest. Operator Hay is to be congratulated upon his exoneration from blame in the matter.

Honoring Mademoiselle Dodu.

The *Journal Officiel* records that, in accordance with a decree of the President of the French Republic, Mademoiselle Dodu, directress of the telegraph station at Montreuil-sous-Bois, has been nominated a Chevalier of the Legion of Honor. The dignity is conferred upon the lady in recognition of an act of coolness and intrepidity performed at the imminent risk of her life during the Franco-Prussian War of 1870, and which has already been referred to in *THE OPERATOR*. The particular privileges attaching to the Chevaliership of the Legion includes the right to a salute from the sentries on guard at the various military stations. In the year 1870, Mademoiselle Dodu, then a very young woman, held the appointment of manager of the telegraph station at Pithiviers. War broke out between France and Germany, and the charge of the telegraphs became an important and responsible duty. The district surrounding Pithiviers was occupied by the invaders, and a large force of Bavarians encamped near the town itself, which was completely at their mercy. The German strategic arrangements depended largely upon the perfection of their system of telegraphy, the slightest hitch or the least disarrangement of which might not alone cause the annihilation of a regiment, but adversely influence the result of a battle. The penalty incurred by cutting or otherwise injuring the lines, was immediate death—a penalty frequently enforced by the Germans throughout the campaign. When the Bavarians surrounded Pithiviers, and subsequently entered the town, they proceeded to the telegraph office, of which Mademoiselle Dodu was in charge. She left the office in the hands of the corps of Uhlans who entered the town. But before abandoning the place to the enemy, she took away the operating instruments, and carefully hid them in the vicinity of the office itself, where she might readily find them again. This she knew would cost the penalty of her life if discovered. With rare courage and self-devotion, and notwithstanding that the office was actually in possession of the enemy, she arose at night, and deliberately sought the operating room with her instruments. At the risk of being momentarily discovered by the soldiers holding the station, she entered, tapped the lines for information, and actually intercepted a most important dispatch from the German commander. Then re-adjusting the instruments, she re-established communication with the French headquarters for nearly an hour, telegraphed to the general commanding there the nature and contents of the message intercepted, and thus saved from destruction thousands of valuable lives whom the successful execution of the German orders would have doomed to death and destruction. Mademoiselle Dodu only escaped the punishment of death herself owing to the cessation of hostilities. The records of modern female heroism contain few actions, either as regards the courage implied in its conception or the determined and effective manner in which it was executed in the face of probable death, more signal than this of Mademoiselle Dodu.

Employer and Employee.

A gentleman from whom we hoped to have had an article for last issue of *THE OPERATOR*, discusses so ably an important subject in a private letter to us, that we take the liberty of publishing his remarks. He says: "I shall be glad to do all I can for you, and regret that my poor health has so seriously interfered with all my schemes. There are many wrongs that should be righted, and many favors that could be consistently shown to faithful men by our employers, which would create a friendly feeling between operators and officers, instead of a feeling of antagonism, which is unhealthy for business. I have longed to get time to write something for our chiefs to peruse and think of, but I presume my words would have little effect, and have been waiting to see

some of the more prominent telegraphers say something in the interests of the men. The company at present has a very bad policy toward its employes. *THE OPERATOR* should be supported. I have said a great deal in its favor, and I urge all to take it. You are making a splendid paper, and ought to have the support of every telegrapher in the country. I regret that there is no more fraternal spirit among us, and so much selfishness. Many argue that as their positions are all right just at present, then all is well, and leave it to those not so fortunate to fight their battles and keep them secure, forgetting that one word from them would have more weight than volumes from discontented, unsuccessful men. Josh Billings says: 'If you expect to have yure opinyuns respected mutch among men you must keep them backed up with at least a quarter or a millyun.' And he is about right. We need power behind our opinions, and until we get it we shall suffer. I shall try to write something for you very soon, but ill-health, family cares, and hard work every day, leave me at night fit for little besides rest and sleep. I couldn't write a humorous letter at the present time. 'Sliding scales' kill humor. Times are out of joint; there is too little appreciation of hard, faithful work; too much dishonesty in regard to promotion; too little rest and recreation for those who need and deserve it; too much work; too little pay; too much red tape, and too little encouragement for those who are honest, diligent, and faithful. The fault is *somebody's*, and I hope and trust that time will lay it at the right door."

The Electric Light in England.

A perfect panic seems to have set in among the holders of gas stocks all over the United Kingdom. Investors in this kind of securities are now busy performing the useless operation of "shutting the stable door after the horse has been stolen." Some of the wisest of them sold out their stock the moment the electric light began to be seriously spoken of. Those who did not have now to cry over spilt milk. Three more electric lighting companies, with an aggregate capital of more than \$1,000,000, have been registered in London in one week. "A Ruined and Distracted Gas Shareholder" addresses to the *London World* the following letter:

"What trade can be safe while this terrible gentleman (Mr. Edison) is at large? Time is flying, and even now, having completed the ruin of the gas companies, he may be turning his diabolical attention to his telephone, which at no distant date shall involve in the same fate unlucky holders of telegraph shares; or he may be perfecting his microphone, which shall make all privacy a thing of the past, and which, if rendered invisible and placed in the council room or in a Minister's pocket, shall insure for Cabinet secrets a publicity not hitherto attained, even when Cabinet Ministers have been near relations. Who knows how long one may count upon having one's thought to one's self, and whether some further development of this machine may not enable it to register our passing ideas as well as our slightest movements, and to record the throbings of so minute and impalpable a thing as the brain of an Edlin with the same ease as it now makes audible the footstep of a fly? Armed with such weapons, the malignant magician will have no difficulty in frustrating any designs against his safety formed by helpless mortals. Everybody must see the necessity for prompt and decisive action, therefore. Meanwhile, I am off to Capel court to sell my shares for what they will fetch, and leave the question as to how to 'bell the cat' to be solved by wiser and cooler heads."

The electric light exhibited in London and Paris is ground out of a revolving magnet by a steam engine, and then distributed through connecting wires to lamps and candles. The lamps used are of various kinds, some of them burning for twenty hours. But there is only one candle—the celebrated Jab-lockhoff candle—which is a stick of carbon placed between two layers of plaster, and looking like a two-foot rule. It burns without manipulation, but does not last more than an hour and a half.

It is said that the cost of the five Lontin electric lights now illuminating the outside of the London Gaiety Theatre, and a large part of the Strand, is only 60 cents an hour.

The Pranks of a Ventriloquist.

During the recent tour of Tony Pastor's troupe, and while in a Western city, the company were invited to inspect the working of Prof. Edison's wonderful phonograph. Among those who accepted was Harry Kennedy, the ventriloquist. After a number of recitations, songs, etc., by the visitors, Mr. Kennedy, while apparently examining the machine, adroitly removed a small pin by which he released the needle from its pressure upon the tin-foil. This, of course, prevented the machine performing its office, and gave the joker license for what followed, an amusing joke upon the exhibitor. Speaking into the mouthpiece, Mr. Kennedy asked, "Does the phonograph speak German?" "Yah," came the reply. The exhibitor was somewhat disconcerted at this, but suggested another trial. "Does the phonograph speak German?" was again asked. "No, by thunder!" was the reply. "It's enough to repeat all the bad English that's hallooed in here." Turning to the exhibitor with a severe demeanor, Mr. Kennedy demanded to see the interior of the machine, declaring his belief that it was not the Edison phonograph, but an imposition on the public; and to support his theory caused a voice to issue from the machine, saying, "Yes, it is a fraud; I am a poor old man, compelled to sit here all day and repeat all that is said; and the scoundrel does not even pay me the pittance agreed upon between us, and I now denounce him."

The bystanders began to murmur, and expressions of dissatisfaction were audible. In vain the agent protested, and, adjusting his instrument, invited another gentleman to test it. No sooner did he turn the crank than out came the voice, with a cry of pain, declaring that the exhibitor was torturing him. This was too much for Western chivalry. One young man declared he would open that box, or fight the proprietor. In the confusion Kennedy withdrew. Some one said "Ventriloquist!" and the crowd realized that they were sold.

The Gold and Stock and the "Bucket Shops."

A decision was rendered November 5th by Judge Donohue in the suit brought by James E. Kelly against the Gold and Stock Telegraph Company to restrain it from removing its instruments from plaintiff's office. The defense is that Kelly keeps what is called by the regular stock brokers a "bucket shop," and that the Stock Exchange threatens to withhold their patronage and stock quotations if the instruments are furnished to the bucket shops. The following is Judge Donohue's opinion: "Passing over the wide range in law and ethics which counsel took in their argument, and without stopping to analyze the morality of the use made of the stock market by either of the parties to the suit or others, it appears to me that the contest narrows itself to a small compass. The value of the information obtained and sent by the defendants arises from the facilities which they enjoy in the Stock Exchange, and without which the information they furnished would not be sought. This information, it is alleged and not denied, is obtained from the Stock Exchange on terms leaving it substantially in the hands of the Stock Exchange to destroy the business of the defendants if they do not obey the Stock Exchange directions, and the latter corporation have directed the defendants to stop the sale of the information to the plaintiffs. At least they virtually tell the defendants that unless this is done the defendants cannot have that on which their existence substantially depends. I know of no law that prevents the Stock Exchange from doing this, and the defendants receiving their news on these conditions must obey. In fact, within the principles laid down in *Kiernan* against the Manhattan Quotation Telegraph Company the defendants might be restrained from using the news except as contracted for. Under the circumstances, and in the present condition of the case, at least, no injunction should issue."

In India the towns communicate by means of signals by candles—a sort of tallowgraph.

The telegraph along the line of the great Canadian Pacific Railway from Fort William on Lake Superior via Selkirk, in Manitoba and the Leatherhead Pass to Burrard Inlet, on the British Columbian Coast, is being rapidly pushed forward. Over 1,000 miles of it have been already built on the two western sections, the total length of the route being 1,946 miles. Where it runs through woodland, the width of the clearance for the railway is 132 feet.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

November 15th, 1878.

Tell our subscribers that we will send The Operator from the present time until January 1st, 1880, prepaid by mail, with addresses changed as often as desired, on receipt of \$1.25.

No matter what you want from New York, whether it be in the line of Telegraphic goods or not, send the order to us. We will see that you get exactly what you want, and at the very lowest price, never charging you more than if ordered direct, and very often considerably less.

A BEAUTIFUL and eminently appropriate holiday present for a young lady is a copy of either "Christmas Evergreens," "Lightning Flashes," or THE OPERATOR one year. All three would be still better, and would only cost \$3.25.

A SECOND cable is about to be laid down between Marseilles, France, and Algiers, as a measure of prudence. The only one which connects those two cities has been in use for eight years, and the maximum duration of those submarine wires is considered to be twelve years.

"Do you want an agent at this place?" ask several correspondents. Yes. In every town and city in which there is a telegraph office, send two dollars for "Evergreens" and "Flashes"—or one dollar for either—and get to work at once. There is no time to be lost.

Mr. WALTER P. PHILLIPS, for the past three years assistant to Mr. James W. Simonton, and in charge of the Associated Press wire, has taken up his permanent residence in Washington. During the sessions of Congress he will be at the head of the Washington Bureau of the Associated Press, subject to recall to New York when needed during the Congressional recesses.

In reply to several inquiries, we would say that there are no agents' commissions on the Telegraphers' New Year's Cards. The price is now as low as it can be put for the quality of cards furnished. We have a large number of names for the cards on hand, but have not yet begun to print any. Shall get at them in a few days, and, in the meantime, pledge our word to intending purchasers that the cards are very neat, and sure to give satisfaction.

The officers of the Continental Co. say that they are doing a very extensive business still, at fifteen cents for ten words, notwithstanding that the A. & P. rate to offices in the vicinity of the Continental offices is only ten cents—and that the company is already paying expenses. It is not believed that the Continental tariff will be changed from what it is at present, and the company is willing to make a yearly contract with customers at that rate.

The Electric Light.

Considerable public attention is being given just now to the subject of electric light. We announced in THE OPERATOR a few issues ago that Mr. Edison had accomplished the hitherto impracticable feat of dividing the light so that it can be used in the same manner as gas. This has had a depressing effect upon gas stocks, which have declined in price fully twenty per cent. in consequence. Word also comes from England that holders of gas stocks there are becoming alarmed, and fear that the electric light will very much interfere with their business.

Mr. Edison has not yet exhibited to the public his method of dividing the electric light, and will not until letters patent are all complete. He feels confident, however, that it is a light that will take the place of gas, and be much cheaper to consumers.

Referring to his first experiments in this direction, Mr. Edison says that an electric light is no new discovery. He only claims that he has found out how to utilize it. His first experiments were made long ago, when he had a laboratory in Newark, N. J. He had the usual trouble with the gas companies. They held him at their mercy, and did pretty much as they pleased. At one time they threatened to tear out his meter, cut off his gas, and throw him back upon tallow dips and kerosene. He spent a month trying to discover a light that would take the place of gas, but met with little success, and finally gave it up. After his removal to Menlo Park he made his own gas.

Last December he experimented on the same line that he is now following up. He got together all the books he could find, and read up on it, and thought that he was left. From what he read he says he got the idea that his theory was utterly impracticable. Two months ago William Wallace invited him up to Ansonia.

Mr. Wallace has all the different electric lights, and the different machines for making them. Prof. Barker and Prof. Chandler were with Edison, who saw for the first time everything in practical operation. It was all before him. He saw the thing had not gone so far but that he had a chance. He saw that what had been done had never been made practically useful. The intense light had not been subdivided so that it could be brought into private houses. In all electric lights heretofore obtained the intensity of the light was great, and the quantity very low. Mr. Edison came back home, and made continuous experiments two nights in succession. He discovered the necessary secret, so simple that a bootblack might understand it. It suddenly came to him, he says, the same as the secret of the speaking phonograph. It was real, and no phantom. He was as sure that it would work as he was that the phonograph would work. He made his first machine, and it was a success. Since then he has made nearly a dozen machines, each different, and the last ones improvements upon those first made. The subdivision of the light is all right. The only thing to be accurately determined is its economy. He is already positive that it will be cheaper than gas, but has not yet determined how much cheaper. To determine its economy he is now putting up a brick building back of his laboratory. It is to be 125 feet long, and he has al-

ready ordered two eighty-horse power engines for it.

The engines are said to be of very excellent workmanship, and are to be used in producing electricity for the electric light. No batteries are to be used. The power of steam is to be turned into electricity, and the greater steam power the more electricity there will be. One object in putting up this brick building is to ascertain how many electrical jets, each equal to one gas jet, can be obtained from a one-horse power.

The articles of incorporation of The Edison Electric Light Company, consisting of Tracy R. Edison, James H. Banker, Norvin Green, Robert L. Cutting, Jr., Grosvenor P. Lowrey, Robert M. Gallaway, Egisto P. Fabbri, George R. Kent, George W. Soren, and Charles F. Stone of New York; Nathan G. Miller, of Bridgeport, Thomas A. Edison, of Menlo Park, N. J., and George S. Hamlin, of Rutherford Park, N. J., were filed recently with County Clerk Gumbleton of this city. The company proposes to light the city public buildings and private residences with electric lights. The electricity is to be made by twenty or more engines, stationed in different parts of the city. Instead of manufacturing all the electricity at one central point, as gas companies make gas, there would be twenty stations. Each station would have an engine and several electric generating agencies. Each station is to have one grand return wire, with which separate wires will connect, thus forming the necessary electric circuit. It is thought that the engines will be powerful enough to furnish light to all houses within a circle of half a mile. The wires can be laid right through the gas pipes, and thus brought into the houses. All that will be necessary will be to remove the gas burners, and substitute electric burners. The light can be regulated by a screw the same as gas, and can be made a bright light or not as may be desired. It can also be turned down or up, and shut off at any time. No match is needed to light it. A cock is turned, the electric connection made, the platinum burner catches a proper degree of heat, and there is the light. There is neither blaze nor flame. There is no singing nor flickering, and the light is whiter and steadier than any known light. It is not known whether it will be much cheaper than gas. It will give no fumes nor smoke. No carbonic acid gas will be thrown off by combustion. It will be a great thing for compositors, engravers, and all forced to work during hot summer nights, for it will throw out hardly any heat. Shades may be used the same as shades upon gaslights, but there will be no real necessity for them. The wind can't blow it out. There can be no gas explosions, and no one will be suffocated because the electricity is turned on, for it cannot be turned on without lighting the burner. A person may have lamps made with flexible cords, and carry them from one point to another.

No attempt has yet been made to discover a meter to measure the amount of gas used. It can probably be measured, but it may take some time to find out how. It is proposed that a man pay so much for so many burners, whether he uses them or not. If it is found that this works an injustice a meter will probably be attempted, but it is feared that it will be very hard to do it.

Electric generating machines could be placed upon steamboats and locomotives, and the boats

and cars lighted by the action of the engines, but the instant that the machinery stops the lights would go out. Mr. Edison thinks that it may be necessary to have an extra engine in each station in cities, to be prepared for accidents. If the first engine should break down, the second one could be used to feed the lights. Country towns, with the use of the electric generating machines, could be lighted by water power. Any power could be used, provided it was strong enough to turn the shaft of the machine with the necessary rapidity.

Christmas Evergreens and Lightning Flashes

Having issued a second edition of "Lightning Flashes," intended principally for outsiders, agents can now have two holiday books to take orders for which they will find no difficulty in selling.

"Christmas Evergreens" is really, at the price, one of—if not *the*—handsomest holiday books recently published, and there will be no trouble whatever in selling it to every person who intends making holiday presents, if you have only a sample copy to show them. "Lightning Flashes" has already sold largely among outsiders, and this second edition will undoubtedly be a still greater favorite. From the present time up to Christmas, every operator who makes the slightest effort ought to be able to add very materially to his salary by interesting himself in the sale of these books.

THE PRICE TO AGENTS.

To telegraphers who act as agents we will supply the books and paper at the following extremely low rates, mailed pre-paid either to them or direct to the customer:

	Regular Price	Price to Agents.
Christmas Evergreens.....	\$1.50	\$1.00
Lightning Flashes.....	1.50	1.00
THE OPERATOR one year, or from Nov. 1st, 1878, until Jan. 1st, 1880.	1.25	1.00
Oakum Pickings (paper).....	0.75	0.50
Sam Johnson (paper).....	0.75	0.50

WHAT AGENTS SHOULD DO.

First of all they should order a copy each of "Evergreens" and "Flashes" to use as samples, as they cannot expect to secure many orders unless they can show intending purchasers what the books are like. It would be well, also, to order one copy each of "Oakum Pickings," and "Sam Johnson;" but these are not so essential. That agents may get to work immediately, and at little or no expense to themselves, we have decided to send, to agents, single copies of "Christmas Evergreens" or "Lightning Flashes"—to be used strictly for the purpose of securing orders—at one dollar apiece, and copies of "Sam Johnson" or "Oakum Pickings," for the same purpose, at fifty cents each. Therefore, send two dollars at once for copies of "Evergreens," and "Flashes," and get right to work. When you sell only two copies of each you will have secured your own copies free. It is hoped that those not intending to act as agents will not take advantage of this very liberal offer for the purpose of securing copies of the books at reduced rates.

HOW TO ORDER BOOKS.

Send remittance with each order, deducting your commission, and give your full name and address in each letter. See that post-office orders are made payable to W. J. JOHNSTON, and address letter legibly: "W. J. JOHNSTON, PUBLISHER, P. O. Box 3332, New York. We can in no case send books to be paid for on delivery; the money

must in all cases accompany the order. Procure post-office order or draft when you can, or register your letter. Don't send more than a dollar in an ordinary letter.

We want agents in every city and town where there is a telegraph office, and the more agents we secure the better we shall be pleased. If circulars in reference to "Evergreens" or "Flashes" are desired, write for them, and they will be mailed free, or if any further information is wanted, drop a postal card and it will be furnished.

Answers to Correspondents.

J. M. B., Hampton, N. B., does not understand why he was unable to "break" an office who was calling him, and why he couldn't "raise" any other office on the line, while his own instruments worked as if there was nothing wrong. His connections, too, seemed to be all right, he says, but he found a ladder resting against the wires outside. This, he thinks, could not have occasioned the trouble, as, he argues, if it did his office would have been cut out. The ladder, however, was what caused all the mischief. The wires were, in fact, crossed, but, owing to rust, did not make a good enough connection to completely cut his office out.

J. H. M., Upter Grove, Ontario: A letter addressed to Prof. Hughes, care W. H. Preece, Surveyor, G. P. O., London, will reach him. Microphones are advertised by Alfred Chiddey, Electrician, St. John's Road, Bristol, England, at prices ranging from \$1 to \$5. They are not for sale in this country, but can be easily made.

"N." We don't know in what manner or to what parts of the instrument Mr. Edison attached fine wire so as to make it sound like an æolian harp. Perhaps he will tell you if you write him.

A correspondent wants to know whether the Telegraphers' M. B. Association has any right to pay the insurance on the lives of members who volunteered for service during the yellow fever epidemic, and died. This is more properly a question for the Executive Committee of the Association, or for the members at the annual meeting, and doubtless will, or probably has, received attention.

More "Pooling."

Following the example of the Anglo-American and Direct Cable Co's., and of the Western Union and A. and P. Telegraph Companies, the Montreal and Dominion Telegraph Companies have agreed upon a basis for "pooling" their gross receipts, and dividing the net profits. According to the terms of agreement, the Montreal company is to receive seventy per cent. of the profits arising from the union, and the Dominion Telegraph Company thirty per cent. It is said that while, consequent upon this "pooling" arrangement, a number of country offices will be closed, but few employes of the companies will be thrown out of employment. The Dominion Company has completed its connection with the Lower Provinces. The tariff between the maritime provinces and Ontario and Quebec will in future be thirty cents for ten words, instead of fifty. No further changes are to take place in the rates on account of the "pooling."

In ordering copies of "Christmas Evergreens," to use as samples at one dollar each, several remark that the commission offered—50 cents net

on each book sold—is very liberal. It is, and this commission is only given to telegraphers. Booksellers are compelled to pay postal or express charges extra, which telegraphers are not. The postage on "Lightning Flashes" is twelve cents a copy. Thus, copies sold to agents only net us eighty-eight cents, while we get a dollar net from booksellers. Telegraphers who neglect to secure agencies for "Christmas Evergreens," and "Lightning Flashes" may regret it when it is too late, and will have only themselves to blame. We want all the agents we can get; the book is very handsome, and there is not a single telegrapher who cannot sell at least half a dozen copies among his friends without going to any especial trouble. Send two dollars for a copy each of "Christmas Evergreens" and "Lightning Flashes," with circulars, etc., and see what you can do between now and Christmas.

It is proposed to establish an international electrical agency in Paris, for the purpose of encouraging the application of electricity to the arts and manufactures for practical purposes. An exhibition of electrical apparatus and instruments, in a central portion of the city, is to be open free to the public, and there will also be a technical library, an inquiry office, and, from time to time, experimental demonstrations. Co-operation is asked from American electricians and instrument makers, who, we hope, will not be slow in lending what aid they can to so useful and important a project.

THE extracts from "Paul Revere's Ride on page eleven, will give some idea of the character, style, and illustrations of "Christmas Evergreens." Of course the poem is given complete in the book. The reader must not, however, judge the book entirely by this sample. The type in the book is larger, the paper is tinted, and the cuts, being very fine, and more care being taken, are printed so much better in the book than they possibly can be in a newspaper, that they hardly seem to be the same.

In large cities, where the concentration of many wires causes induction and a disturbance of the ground currents, there is a demand for a louder telephone. The Bell Telephone Co., therefore, finds it expedient to introduce in some sections a battery telephone, and has succeeded in manufacturing, under the patents owned by it, what is said to be the best instrument for the purpose in use. This telephone is so constructed that careless handling does not render it useless by throwing it out of adjustment.

As will be seen from advertisement on pages 13 and 14, we have now ready a second edition of "Lightning Flashes," more particularly intended for persons outside of telegraphy. It is a very handsome book for a holiday present, and agents will find no difficulty in selling copies to their non-telegraphic friends. The commission is the same as on "Christmas Evergreens," and single copies will be mailed to agents—for use as samples—at one dollar each. Agents who have already ordered copies of "Christmas Evergreens" would do well to send for "Lightning Flashes."

SAMPLE copies of December 1st issue for getting up clubs mailed free. Send for some, and get up a club.

Chicago Notes.

Contrary to past experiences, Chicago office has only a working supply of operators. Usually at this season of the year there is quite an excess, but it is a noticeable fact that those who were so unfortunate as to be compelled to labor for the paltry sum of \$50 a month, have either secured better positions elsewhere or have quit the business. At all events, few of them remain, and in consequence the management have been endeavoring to meet the temporary demand for men by securing other \$50 operators. But they have not been very successful, and it looks now as though Supt. Wilson's oft-repeated declaration that "he could fill the model(?) office of the world with \$50 men," is about to fail. Mr. Herbel, of St. Louis, resigned and left for his home on the 10th. Mr. Storey, of Baltimore, left the city for the East the 20th. Mr. Howey resigned and has gone to Texas to engage in other business. "Jim" Wright, who has served several years in this office, resigned and left for his home at Toledo, Ohio. Chas. H. Haselton, one of the deservedly popular men of the office, and a first-class operator, has resigned from the W. U. office and accepted a position with the Chicago and Milwaukee Telegraph Co. Mr. Cozzens has also resigned, and accepted a position with the Michigan Central Railroad. Mr. Chas. A. Allen, well known to all who have worked in Chicago in recent years, resigned and accepted the management of the Milwaukee office of the new line between this city and Milwaukee. The above operators constitute some of the best men of the office, and puts beyond the shadow of a doubt the declaration of your correspondent some months since, that two-thirds of all the men of the office were only waiting a favorable opportunity to quit a hated presence. With many a wish that we were ourselves as fortunate, we feelingly bid them, one and all, God speed. John W. Smith has gone to Dubuque to "sub" for a month. Bob Hays has returned from Buffalo, and desires a public acknowledgment of the handsome reception (?) tendered him by his Cleveland friends. Mr. Patterson, of New York, "done" the office on his way to Ogden, Utah. E. C. Greene, sub-chief of Division B, nights, has been transferred to the day staff, and C. C. Robinson appointed to fill the vacancy. We hope Charley finds it a suitable reward for having informed the "Colonel" all he pretended to know about the proposed protective organization. Charley Day at last accounts was working nights, so Ed. Patton says. Mr. Boyle has resigned and gone home to Detroit, Mich. Night Manager Springer is off on a hunting expedition. Assistant Night Manager Kelley presides in his inimitable style during Mr. Springer's absence. The Chicago and Milwaukee Telegraph Company (built by the Board of Trade men) is doing admirably. The Board of Trade Company, a creature of the W. U., thought to kill the new company at the start by making the tariff to Milwaukee five cents, but they signally failed. The new company held to its rate of ten cents, and the business men cling to them with death-like tenacity. They handle two-thirds of all the business, and claim that it returns a revenue above all expenses to the builders. Mr. Shoales, formerly chief operator of W. U. office, is superintendent and manager of Chicago office, assisted by Mr. Haselton as operator. Milwaukee office is managed by Mr. Allen, assisted by Johnny Gale as operator. They have two excellent wires—receive on one and send on the other. The main office is with the Bell Telephone Company, on La Salle Street. A rumor is current that "Argus," the loved and lost, has been recently discovered hovering in spirit form around the secret corners of the office, and if the rumor proves correct, as all pray it may, those who created a certain cipher book, sold it and retained certain copies for their own private purposes, had better correctly understand the exact meaning of "a word to the wise is sufficient." Mr. Loomis, formerly of Cleveland, Ohio, and Ed. Foote, of the Board of Trade, are recent additions to the day force. There are several others unknown to the writer. As a matter of information to those who may be desirous of securing one of the several vacancies existing here at present, it is only necessary to say \$50 is the standard salary. Rumors are current of the Continental Company reaching here every many days, and the mere rumor is received with "glad tidings of great joy." The endeavors to secure a place with them will be decidedly amusing to a disinterested party. Anything, you know, to get away from the present management of the W. U. office.

JUNO.

A company of eminent electricians are about forming a company to introduce the electric light into London.

The Yellow Fever Dying Out.

We are glad to have only to report two deaths from yellow fever among the telegraphers of the South since our last issue. Operator Robert J. Wallace, of East Pascagoula, Miss., died at that place November 2d, and the wife of Operator C. R. Vestal died at Mobile on the 7th. The other operators still down with the fever are reported doing well.

It is to be hoped that no further telegraphers will fall victims to the dread scourge, for sorely has the fraternity suffered since the outbreak of the epidemic, and nobly have its members in the infected districts stood up at their posts of duty, in the face of an almost certain death.

The New Orleans correspondent of the New York Herald, speaking of the fever among the telegraph operators, says:

There is one point, I think, to which the attention of the Commission should be directed, namely, the fearful mortality among the telegraph operators who have been subject to the fever this year. The sickness and mortality seem to have been measured by the length of the lines upon which they operated. That any importance should be attached to this I do not pretend to say, but such is the fact. In the district telegraph offices, out of six unacclimated operators, one was sick, and, singularly enough, this one is a native of New Orleans, and has resided here for the last eighteen years. In the Ocean telegraph office they have five operators; two have been sick, and both recovered. In the Belize telegraph office there were six operators, all supposed to be acclimated; yet one of these took the fever, it is said, in this city, while attending the funeral of a friend, and died. In the Western Union Telegraph office there have been eighteen unacclimated operators since the 1st of August. Out of these, eight have died, showing a death rate of forty-five per cent, leaving several who are still sick to be accounted for hereafter. The exhibit made by the Pacific Telegraph office is even worse. Out of four operators here, two have died, just one half of those employed. There seems to have been no difference in the mortality between the day and night operators—all have been affected alike, though the night operators were first stricken with the disease. The fearful rapidity with which the disease runs its course is also noticeable. One was taken sick on the evening of the 15th inst., and died on the 20th, an hour and a half after midnight; another was taken on the morning of the 16th inst., and died at half past nine A. M., on the 21st—both within twenty-four hours of each other. These cases are in our city alone. In other places, I understand, the mortality has been quite as bad, even worse. No doubt if the Fever Commission will make proper inquiry, they can get all the necessary information from these localities, and the inquiry should certainly be made. I merely give facts, without pretending to explain them, only it is evident that electrical or electro-magnetic currents must have played an important part in the yellow fever this year, and this possibly may lead to some important discovery that will serve to explain some of the mysteries of this terrible disease.

The Life that Attaches to Submarine Cables.

The amount of submarine life that comes up on a cable which is taken up for repairs after being immersed for a year or two is surprising. Three years ago the writer was with a repairing expedition on the Para to Cayenne section of the Western and Brazilian Company's cables. We were chiefly at work off the Island of Marajo, in the estuary of the Amazon. The cable had only been submerged about a month; yet it came on board the ship at places literally covered with barnacles; at others overgrown with submarine vegetation, crabs, and curious shells, often of singular delicacy and beauty. The sea-weeds were in great variety clinging to the cable, sometimes in thick groves of red and yellow algae; slender, transparent, feathery grasses; red slimy fucoids, and tufts of amethyst moss. We found branching coralline plants upward of a foot in height growing to the cable, the soft skeleton being covered with a fleshy skin, generally of a deep orange color. Sometimes a sponge was found attached to the roots of these corals, and delicate calcareous structures of varied tints incrusting the stems of all these plants, and served to ornament as well as to strengthen them. Parasitic life seems to be as rife under these soft tepid waters as it is on the neighboring tropical shores. Many star-fishes, zoophytes, and curious crabs and crustaceans were

likewise fished up on the cable. The crabs were often themselves completely overgrown with the indigenous vegetation of the bottom, and so were scarcely distinguishable from it. Others, although not so covered, were found to have the same tints as the vegetation they inhabited, and even in structure somewhat resembled the latter. Others again were perfectly or partially transparent; and one most beautiful hyaline crab, new to science, united in its person several of the prevailing colors of the bottom. Its slender limbs, like jointed filaments of glass, were stained here and there of a deep topaz brown. Its snout, pointed like a needle, was of a deep scarlet; its triangular body was of a deep yellow; its eyes were green; and its tiny limbs of an amethyst blue.—*Chamber's Journal*.

Washington Notes.

The veteran John Happ, who has been in the employ of the different telegraph companies in this city for the past twenty-five years, has resigned his position as delivery clerk for the Western Union Company, and Mr. Frank Avery, formerly night receiving clerk, has been appointed in his place. Mr. Happ was probably one of the best delivery clerks in this country, and his ingenuity in that capacity something wonderful. He was universally acknowledged to be a "traveling directory." For this reason he labored under the erroneous idea that the company could not dispense with his services. Manager Whitney did a commendable act in distributing Happ's salary among the clerks. Mr. James Halley, who used to waft vitiated Morse from the National Hotel office in this city, but who is now manager of the Deadwood telegraph office, made us a flying visit a few days ago. He is enjoying the festivities of a wedding trip. W. W. Kelsor, of the day force, was married to Miss Nellie Brown, of this city, September 25th. This will probably incite Lombard's courage to the "sticking point," and it is hoped he will go and do likewise. H. S. Larcombe, alias Texas Jack, alias Hawkshaw, the man of many adventures, swooped down upon us in all his innate ferocity one day last week. He bears the emblems of many bloody affrays during his sojourn in New Mexico. It is understood that he has decided to devote the remainder of his life to agricultural pursuits. We expect soon to see McKeldin's name emblazoned on the bill posters as a variety actor. He has of late appeared in several amateur combinations, and created quite a sensation. Mac has the natural talent, and with a little practice would make a versatile artist. Hambright, owing to the illness of his wife, has been transferred to the day force.

WASHINGTON, D. C., October 23d.

Echoes from 197.

Miss Emery has resumed duty.

Miss Garthwait works the St. Nicholas wire.

Alice Sykes works 22 short, and signs "M. S."

Miss Lillie Spear rushes 'em (M.) on the "S. D." wire.

Operator W. H. Grant has returned from Fire Island.

Mrs. Lizzie MacPherson and Miss Sophie Hepburn have resigned.

Printing operator Noyes, lately from Boston, has been assigned to duty on the Washington printing circuit.

Mr. M. J. Landy, who worked for the W. U. at Saratoga during the past summer, is subbing at 145 Broadway.

Miss Yosinski, from 30th St. depot, has taken the position made vacant by the resignation of Mrs. E. MacPherson.

Mr. McEnroe is very modest. The ladies gazed at him so persistently, while he worked the Cincinnati wire, that he was obliged to take a back seat.

Ignorant, Observer—What is them men doin', Bill?

Intelligent Ditto—Why, takin' up the telegraphs to see as no words is leakin' out.

Nearly 1,000,000 trees have been used in the erection of about 80,000 miles of telegraph wire in this country, and probably 400,000 more are required every year to keep them in repair.

Magnetic Attraction and Repulsion.

A number of the N. Y. night men recently received official communications conveying the hint that it was not really, vitally necessary that they should stand in front of the Western Union building every evening in the immediate neighborhood of five o'clock, and of "the female operators who are then coming off duty." This order, if so it can be designated, seems to be particularly heartless, and extremely unnecessary on the part of the Western Union. If the officers of the company will ask any ordinary operator, they will learn that it is not so easy a matter to become acquainted with the ladies at 197 as they (the officers) seem to imagine. Why, a few weeks ago one of the men who was rash enough to address a lady operator out of the office, had the felicity of appearing before the Court of Inquisition next morning to plead guilty or not guilty to no less than four separate counts. And now, instead of a 7.30 to 5 trick, that man comes on duty at high noon, and ruminates on the whimsicalities, inconstancy, and general perverseness of the opposite sex until nine at night.

A little episode that occurred not long ago on a Brooklyn ferry boat between a gentleman and lady operator of 197, might also be cited in this connection. The gentleman was a warm admirer of the lady, at a distance, but had never had a formal introduction. However, repeating to himself something about "faint heart" and "fair lady," he ventured to approach her with:

"Good morning, Miss——!"

But she only stared at him with a look so frigid that it almost took his breath away. Still, thinking that there might possibly be a mistake somewhere, he tried again:

"A-hem! Beautiful morning, Miss——!"

To which she merely replied with the most sublime disdain:

"I have not the honor of your acquaintance!"

"Why, I work up in the office," he said, with hope in his heart.

"What office?" she asked, imperiously.

"The telegraph office," replied the knight of the key, proudly.

"What telegraph office?" she inquired, with a look of the most intense and heartfelt indifference.

The gentleman did not continue the exercise further, and when he saw her turn to smile and converse with another operator, the legend goes that he then and there vowed to devote the remainder of his life to "running female operators out of the telegraph business." Let the officers of the Western Union pause and consider before they do anything that may blight any more young lives, by causing an estrangement between the sexes, for, with salaries so low as they are at present, what is there to tempt one to remain in the business if, when he is not on duty, he cannot have "a bright particular star"—even if it be a telegraphic star—"and try to wed it."

A Ten Mile Walking Match.

A well-contested ten mile walking match between employes of the Western Union operating room, New York, took place at the Westside Park, Jersey City, on Saturday, November 9th. Three medals were offered as prizes, one being of silver, and two of gold. The medals are quite handsome in appearance, bearing on their face the raised figure of an athlete. A clasp is attached to each medal, which will be suitably engraved. Messrs. William Maver, Jr., and Hugo Weise being noted amateur walkers, one of the two gold medals was set apart solely for their competition. Maver walked the ten miles in 1.41.36, Weise's time being 1.41.40. The other contestants arrived in the following order:

Donohue, 1.44.46.,	Mahoney, 1.56.43.,
Voyer, 1.51.54.,	C. H. Miller, 2.01.00.,
Foster, 1.53.26.,	Wilcox, 2.06.20.,

A gold medal was awarded to D. C. Donohue, and the silver medal to A. J. Voyer.

Messrs. W. J. Landy and Burt withdrew from the contest, the former when he was a good third at the ending of the ninth mile, and the latter on the fifth mile. A high wind and an unusually

heavy track interfered considerably with the contestants. Manager Downer, chief operator Townsend of the C. N. D., cable chief Leslie, and about 150 operators and their friends were present.

The success of the affair was largely due to the President of the Telegraphers' Athletic Association, E. F. Welsh, and to the Secretary, James H. Lyman. Mr. Whitehead of the *N. Y. Sportsman*, was referee.

After the conclusion of the match, two of the mellowest of hours were spent at the Westside hotel, and then the boys dispersed, fully satisfied of the truth of the couplet:

"Care to our coffin adds a nail, no doubt;
And every grin so merry draws one out."

An Important Discovery by Miss Hosmer.

Miss Harriet Hosmer, a well-known and eminent sculptor, has made a discovery that is creating considerable excitement among the scientific men of England, and, if all that is said about it be true, will probably place her name on a level with those of Fulton and Morse.

The London correspondent of the *New York Evening Post* says that the new discovery has been confidentially shown and described to him by Miss Hosmer, who only permitted him to publish a general idea of the application for the present.

A machine is now in process of construction for Miss Hosmer, by Mr. Browning, of London, which is not dissimilar in its general design to an electro-magnetic engine. The important feature consists in an absolutely novel application of the permanent magnet. There is no electric battery, and consequently no induced magnetic action. The magnets are permanent magnets. They are arranged so that the whole power is derived from them, but there is no battery nor any other device for creating or conveying an electric current. The power derived is due solely to the force contained in the permanent magnet. There has been no such property known until Miss Hosmer discovered it. Herein lies the whole secret, and the whole of her claim to originality. The machine to which the principle is applied—ingenious and valuable as it is—is not an absolute novelty; but, on the other hand, this machine is only one of a thousand applications which can be made of the principle. If the correspondent were allowed to set forth the method adopted to obtain this result, he says, he could cover the whole explanation in ten lines.

"When I knew that I had succeeded in finding what I had been seeking for by study and experiment for fifteen years," said Miss Hosmer, "I first asked the opinion of a well-known American engineer, Mr. Clarke, a relative of the Rev. James Freeman Clarke, of Boston. Having seen the invention, he assured me that I need have no doubts as to the value and importance of my discovery. I then came to England, and consulted Mr. Newton, of Newton & Hales. Well, he could scarcely believe his own eyes, and I had to repeat my demonstration several times. Then he made the magnet accomplish the work himself. His partner, Mr. Hales, came in, and dropped down on his knees beside the table as he saw me repeat my experiment. These gentlemen and Mr. Browning, the well-known maker of scientific instruments, are all enthusiastic over my discovery, and are thoroughly convinced as to its practicability."

Miss Hosmer said, further, that among others who had been shown the new principle applied was Mr. John Penn, Jr., of the well-known works at Greenwich, and she had a letter from him saying that the discovery actually frightened him, so great would be the revolution in machinery. Prof. Tyndall was away in Switzerland, but he had had the principle described to him, and in a letter from Mrs. Tyndall to Miss Hosmer he enclosed a message testifying to the importance and absolute novelty of her discovery, and saying that he should give it careful attention on his return to England.

Mr. Browning is now engaged on a four-horse power machine for Miss Hosmer, and it is to be completed this winter, when Miss Hosmer will return to London from Rome, and have it publicly exhibited.

Dashes Here and There.

The telegraph, like a musician, beats time.

While Mr. Edison has taken out one hundred and fifty patents, he only attaches importance to about twenty of them.

The Danish Government have decided to light up the ports of Copenhagen and Elsinore, together with the whole length of the Sound, by electric light.

Beware of sudden admiration. The superintendent who takes twenty years to make up his mind that you are level-headed will die of the same opinion.

It is said that an important improvement by Messrs. Gower and Roosevelt, on the Bell telephone, by which speech can be heard when the instrument is held several feet from the ear, has been exhibited at Paris.

The London *Times* office is now lighted with the electric light. Six lamps have been fitted up in the printing room, and others will be introduced into the compositors' room. It is likely to prove very beneficial to the compositors who work by night in a hot and vitiated atmosphere.

The Eastern Telegraph Company's cable has been extended to Cyprus, and was opened for traffic on October 18th. This puts Cyprus in direct telegraphic communication with Malta, Gibraltar, and England, also with France, Italy, Greece, and Constantinople, and, on the other side, with Egypt and India.

At the half-yearly general meeting of the London Gas Light Company, held October 2d, one of the speakers urged the gas companies to take up the electric light as an auxiliary to gas lighting. It was generally admitted that the electric light would be one of the lights of the future, and was not to be repudiated or ignored.

A cable dispatch says that the snow storm in Vienna on Sunday the 3d instant was very heavy. All the railways and telegraph lines in that section were interrupted, and thousands of telegraph poles were prostrated. The parks and trees in the city were generally injured, and the snow was several feet deep. The storm extended throughout Austria.

It is proposed to have the powerful cataract of Niagara Falls store up electricity which could be sent by wire, in sort of special dispatches, as it were, wherever needed. A slight difficulty here presents itself. The conductor must be copper, or the loss of the fluid will be too great to render of any service the electricity received at the end of the line. A copper conductor from the Falls to Detroit would cost the trifling amount of \$72,450,000. Thus it is that financial difficulties mar the most promising enterprises, and it is likely that some few years will yet elapse before machinery is driven in Detroit by power furnished at Niagara Falls—*Detroit Free Press*.

On the 3d of August, 1876, as reported at the time in *THE OPERATOR*, a rotten telegraph pole fell at the corner of Grand and Suffolk streets, killing one woman and injuring others. Among the latter was a little girl named Lea Frediger, who her friends claim sustained permanent injuries, for which she brought suit by her guardian against the city. The case was tried before Judge Donohue and a jury in this city Nov. 11th. The result was a verdict in favor of plaintiff for \$2,700. The trial of a similar suit growing out of the same accident followed in the same court. The victim in this instance, Mrs. Ann McGuire, was killed, and her husband, J. C. McGuire, brought suit to recover the statutory limit of damages, \$5,000. The jury gave a verdict in favor of the plaintiff for \$4,000.

A man who is engaged in the exhilarating and laudable exercise of "rushing" somebody doesn't care about anything else. The glories of the world pall on his taste, the wonders of creation seem as naught. The work in hand demands all his attention, and the rest of life is hidden in a cloud of its billowing smoke. You can't borrow anything of a man who is rushing another. You can't instruct and improve him. You tell him that the world travels at the rate of a thousand miles a minute, and it doesn't startle him in the least. He simply continues sending. You say to him: "My friend, there are stars so far off that their light has not yet reached this world," but he doesn't mind it. He only sends the faster. You tell him that some of the sun spots are 100,000 miles in diameter, and that one of them would take in Jupiter at one mouthful, but it is nothing to him. He goes on sending just the same. Sometimes a man will send so fast that several strong men have to hold him down by main force while some important scientific news is being communicated to him.

The Western Union Surplus.

The price of Western Union stock has fallen off somewhat since last issue, and is now quoted a 95½. Two weeks ago it was rumored that William H. Vanderbilt, D. O. Mills, E. D. Morgan, James R. Keene, Jay Gould's representatives, and a large number of stockholders of the Western Union signed a petition requesting President Green to call a meeting of the stockholders for the purpose of discussing the advisability of capitalizing the surplus of the company, amounting to \$17,000,000, and dividing it among the present stockholders pro rata. Under the by-laws 30 days' notice of such a meeting is required, and it is necessary that at least one-third of the outstanding stock should unite in the call. If the projectors are in earnest, there is no doubt that the capitalization will be carried. The first six gentlemen named above own or control between them \$19,000,000 of the \$35,000,000 of stock outstanding. Mr. Vanderbilt alone controls nearly \$8,000,000. Mr. Mills is the next largest stockholder, though Mr. Morgan controls more than he does. Messrs. Keene and Sage come next in order. President Green, when questioned, acknowledged that such a project was on foot, and expressed himself as of the opinion that it would be carried out before Jan. 1. The other gentlemen named were reticent, and refused to talk. Of the \$17,000,000 surplus, half is represented by newly-built or purchased lines and by the new building of the company on Broadway, and the other half by over \$6,000,000 of its own stock, over \$7,000,000 of the stock of the Atlantic and Pacific Telegraph Company, and by over \$1,000,000 each of the stocks of the Gold and Stock and International Ocean Telegraph Companies—all dividend-paying. It is believed that the company will be able to pay a 6 per cent. dividend on \$50,000,000 of capital. It was on rumors of this kind that the stock was recently forced up from 88 to 102. Prominent bears in the market call attention to the fact that Augustus Schell, who is a Director and also a member of the Executive Committee of the company, was President of the Lake Shore Railroad Company when a similar movement took place in its stock. Under the pretence of large surplus earnings, the stock was watered, having previously been driven up to 120 in the market. It was subsequently ascertained that the real earnings were not only not sufficient to pay a dividend on the watered stock, but that they had not justified the dividend that had been paid for years on the original capital. The consequence was that the stock tumbled so that to-day 68 is considered a very high price for it.

PERSONALS.

James Macklin, manager of the W. U. office at McVeytown, Pa., was married last week to Miss Jennie Leaton.

J. M. Miller, formerly operator for the Pennsylvania Railroad Co., is working for the Western Union Co. at Connelville, Pa.

On account of the space taken up by advertisements in this number, we issue a sixteen page paper. Next issue will also contain sixteen pages.

James Hopkins, lately with the Fire Alarm Telegraph Co., Pittsburgh, has resigned and accepted a position with the Pennsylvania Railroad Co. at East Liberty, Pa.

F. P. Wherry, lately employed by the Keystone Bridge Co. of Pittsburgh as operator and stenographer, is working in superintendent's office, Pennsylvania Railroad Co., at Pittsburgh.

W. E. Everett, operator at Hopefield, Ark., was stricken down with the fever, and died after a few days' illness. Capt. Keefe, who had a slight attack, is now up and filling Mr. Everett's place.

The latest arrivals at Boone, Iowa, dispatcher's office are Robert J. McCarty and Will Bennett—"Bob" relieving Jives, working all around days, and Bennett being transferred from General office, Chicago, to night dispatcher, relieving Fred Potter, resigned.

John J. Driffley, a well-known operator of Indianapolis, died in that city last week. Resolutions of respect for his memory were passed by two societies with which he had been connected, as well as by the telegraphers of Indianapolis. He was buried November 6th.

Ed H. McGinty, operator at Center Junction, Iowa, has obtained letters patent on his automatic car-coupler, and has several freight cars on the Iowa Midland Railway fitted up with them, doing excellent service. Ed will soon retire from telegraphy, but says he will never go back on THE OPERATOR.

At a meeting of the operators of the New Orleans & Mobile Railroad, November 3d, of which George H. Adis was chosen chairman and C. K. DeLappe secretary, suitable resolutions of respect for the memory of Robert J. Wallace, operator at East Pascagoula, Miss., who died of yellow fever Nov. 2d, were drawn up by James M. Duclap, and unanimously adopted.

We have before us a copy of THE OPERATOR, a journal published semi-monthly in New York city, and devoted to telegraphy, being edited and published by telegraphers. The paper began with a circulation of 100 copies in 1853, and now has 7,000. Mr. Tracy Barnes, assistant train dispatcher in the Northwestern office in this city, is general agent.—*Union (Iowa) Herald*.

Mr. T. J. Grier, who for several years past has been in the employ of the W. U. Company at Corinne and Salt Lake, and for three years past has been chief operator at the latter place, is now secretary of the Homestake Mining Co. at Lead City, Dak. It is a very important position, and could have been bestowed upon no worthier or more deserving man than Mr. Grier. He was undoubtedly one of the most popular chief operators in the employ of the company, and his resignation from the service caused a feeling of regret all along the overland lines.

At a meeting of the members of the Tel. M. B. Ass'n resident in Baltimore, held on Sunday, Nov. 3, at the office of the W. U. Tel. Co., Mr. J. Frank Morrison was chosen Delegate by a unanimous vote, and a contribution was agreed upon to defray the expenses of the Delegate to New York. A copy of a letter written by the President of the W. U. Tel. Co., Dr. Norvin Green, was read, authorizing the District Superintendents to procure free passes for Delegates to the annual meeting, which was received with much satisfaction by the meeting.

HOOSAC TUNNEL & T. & G. RAILROAD.—Geo. S. Gould has been appointed night dispatcher at North Adams, vice E. S. Brown, resigned. H. A. Hodge, night owl at Greenfield, has resigned to accept a position in General Superintendent's office, F. R. R., Boston. G. H. Pixley takes his place at Greenfield. F. A. Miller at West Portal is off on the sick list, his place being filled by L. E. Ost. W. B. Read's plug factory at Buckland isn't doing a very good business just now. Taylor at East Portal, although new at the business, is said to be one of the best men on the line to keep awake.

The only grand medals awarded for electric inventions at the Paris Exhibition have both been carried off by Americans. They have been given to Mr. T. A. Edison and Mr. Elisha Gray for the invention of telephones. Mr. Elisha Gray deserves a considerable share in the honor of inventing the first speaking telephone—more than he obtained to begin with; but if the French award means that he is the true and sole inventor of the speaking telephone to the exclusion of Prof. Bell, it gives him more than his due. Gray invented the electro-magnetic receiver perhaps a little before Bell, but it was Bell who made the electro-magnetic transmitter, and produced a complete electro-magnetic telephone. In fairness the honor should at least be divided between these gentlemen.—*Telegraphic Journal*.

SARATOGA DIVISION D. & H. CANAL Co.—Mr. S. D. Curtis, formerly ticket agent and day operator at Fort Edward, has been appointed freight agent at Saratoga, and Mr. Parker has been appointed

operator and clerk at same place. Mr. W. B. Thompson, formerly operator and clerk at Saratoga, has been transferred to Fort Edward as ticket agent and day operator. Mr. Geo. A. Harper, owl at Fort Edward, is taking a vacation, Mr. Thomas White, of Albany, subbing for him. Mr. H. M. Rich, ticket agent and day operator, and McQuaid, night operator, of Whitehall, have returned to work again after a couple of weeks' vacation. Mr. E. E. Ferry, who had charge of Saratoga (summer office) last season, has returned to Rutland, Vt., again. Miss Katie Hawks, assistant operator at Ballston, is on vacation, Mr. E. J. Morris attending to her duties.

CHRISTMAS EVERGREENS is bound in five colors—dark brown, light brown, bright blue, steel blue, and olive. Persons ordering can have whichever of these colors they prefer. The binding, as befits the book, is very rich and tasteful. The name on the side is on bands of gold, within lines of ink, behind which is a sprig of evergreens in gold. In each corner is a bunch of holly, and outside of all is a band of gold. The name of the book also runs in gold from end to end along the back. The size of "Christmas Evergreens" is 8½ inches by 6½, somewhat thicker than "Lightning Flashes." If there has ever been a handsomer book at the price issued from an American press, we do not know of it, nor does anybody who has yet seen "Christmas Evergreens." Just wait till you see the book, and then judge if this be any exaggeration.

SANTA FE, N. M.—This place is the southern terminus of the W. U. line, extending south from Denver. The office here is under the superintendence of J. M. Gough, a very careful and efficient manager. He has his son, a youth of fifteen, as an assistant, whose ability as an operator, considering his age, is something to be wondered at. Santa Fe is also the northern terminus of the U. S. Military Telegraph Line, of which Lieut. Allen, of the Signal Corps, is superintendent, and W. G. Adams chief operator. Mr. Adams is well known in Eastern telegraphic circles, having been connected with the A. & P., and also with the Pennsylvania Railroad Co. The U. S. Line extends west into New Mexico as far as Silver City, where it connects with the U. S. Line in Arizona and California. Lieut. Allen has just gone South to superintend the building of an extension from El Paso to Fort Davis, Texas, connecting with the U. S. Line in Texas. As matters of telegraphic interest develop here I will keep you informed. LESTER.

P. & E. RAILROAD.—P. Stewart is dispatcher at Elizabethtown, Ky., assisted by W. C. Sutherland and L. E. Moores. J. A. Burke presides at freight office. J. W. Ward and G. R. Allhands are at ticket office. G. R. Gray, an old-timer, is at Cecelian Junction, and W. T. Walker at Big Clifty. Jim McNicholl graces Litchfield office, and Fred Haag Millwood. M. J. Shaffer, a relic of antiquity, is at Caneyville, and G. L. Brady at Horse Branch. "Jolly" Frank Turpen is No. 1 at Beaver Dam, and W. H. Burton at McHenry. The "Stolid" L. P. Raley at Rockport is our good boy. Geo. A. Carpenter (familiarily "Tex"), is the efficient manager at Owensboro Junction, and Ben Pearl at Greenville. All the handsome men are at Nortonville, but they are all engaged. They are respectively G. L. Spink, Haynes Vertrees, and W. H. Peace. Walter Wheatly is at Princeton, and Tim O'Leary at Eddyville. Geo. B. McCoy, formerly connected with Pullman Southern Car Co., is now at Paducah. Our boys are all model fellows, read THE OPERATOR, and are happy.

MARRIAGES.

ROBBINS—BARRY.—October 31st, at the residence of the bride's father, Keokuk, Iowa, Mr. Fred L. Robbins, operator W. U. Tel. office, to Miss Ida E. Barry. The *Gate City*, referring to the wedding, expresses the hope that in assuming the responsibilities of married life, Mr. Robbins' lines may never be down, that his joys may be " manifold," and that in the pursuit of domestic happiness he may never reach "30."

BIRTHS.

Oct. 20, to J. F. Guthridge, operator W. U. Tel. Co., Baltimore, a son.



EXTRACTS FROM
Paul Revere's Ride,
IN "CHRISTMAS EVERGREENS."

LISTEN, my children, and you shall hear

Of the midnight ride of Paul Revere,
On the eighteenth of April, in Seventy-five;
Hardly a man is now alive
Who remembers that famous day and year.

He said to his friend: "If the British march
By land or sea from the town to-night,
Hang a lantern aloft in the belfry arch
Of the North Church tower as a signal light,—
One, if by land, and two, if by sea;
And I on the opposite shore will be,
Ready to ride and spread the alarm
Through every Middlesex village and farm,
For the country-folk to be up and to arm."



Then he said "Good night!" and with muffled oar

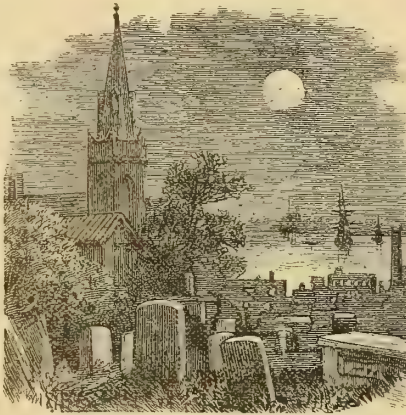
Silently rowed to the Charlestown shore,
Just as the moon rose over the bay,
Where, swinging wide at her moorings, lay
The Somerset, British man-of-war,
A phantom-ship, with each mast and spar
Across the moon like a prison bar,
And a huge black bulk, that was magnified
By its own reflection in the tide.



Meanwhile his friend, through alley and street,
Wanders and watches with eager ears,
Till in the silence around him he hears
The muster of men at the barrack door,
The sound of arms, and the tramp of feet,
And the measured tread of the grenadiers
Marching down to their boats on the shore.

Then he climbed the tower of the Old North Church,

By the wooden stairs, with stealthy tread,
To the belfry chamber overhead,
And startled the pigeons from their perch
On the sombre rafters, that round him made
Masses and moving shapes of shade,—
By the trembling ladder, steep and tall,
To the highest window in the wall,
Where he paused to listen and look down
A moment on the roofs of the town,
And the moonlight flowing over all.



Beneath, in the churchyard, lay the dead,
In their night-encampment on the hill,
Wrapped in silence so deep and still
That he could hear, like a sentinel's tread,
The watchful night-wind, as it went
Creeping along from tent to tent,
And seeming to whisper: "All is well!"

Meanwhile, impatient to mount and ride,
Booted and spurred, with a heavy stride
On the opposite shore walked Paul Revere.
Now he patted his horse's side,
Now gazed at the landscape far and near,
Then, impetuous, stamped the earth,
And turned and tightened his saddle-girth:
But mostly he watched with eager search
The belfry tower of the Old North Church,
As it rose above the graves on the hill,
Lonely and spectral and sombre and still.
And lo! as he looks, on the belfry's height
A glimmer, and then a gleam of light!
He springs to the saddle, the bridle he turns,



But lingers and gazes, till full on his sight
A second lamp in the belfry burns!

A hurry of hoofs in a village street,
A shape in the moonlight, a bulk in the dark,



And beneath, from the pebbles in passing, a
spark
Struck out by a steed flying fearless and fleet:
That was all! And yet, through the gloom and
the light,
The fate of a nation was riding that night;
And the spark struck out by that steed in his
flight
Kindled the land into flame with its heat.

You know the rest. In the books you have read
How the British Regulars fired and fled,—



How the farmers gave them ball for ball,
From behind each fence and farm-yard wall,
Chasing the red-coats down the lane,
Then crossing the fields to emerge again
Under the trees at the turn of the road,
And only pausing to fire and load.

So through the night rode Paul Revere;
And so, through the night went his cry of alarm
To every Middlesex village and farm,—
A cry of defiance and not of fear,
A voice in the darkness, a knock at the door,
And a word that shall echo forevermore!
For, borne on the night-wind of the Past,
Through all our history to the last,
In the hour of darkness, and peril and need,
The people will waken and listen to hear
The hurrying hoof-beats of that steed,
And the midnight message of Paul Revere.



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Nothing is more appropriate for a Christmas present than a handsomely illustrated volume of good poems; nor is there anything that will be better appreciated, especially, by the young, or furnish more refined, wholesome, and inexpensive amusement, instruction, and profit combined. Sir Richard Steele, the partner of Addison in *The Tatler*, says, in No. 98 of that periodical: "If, therefore, I were blessed with a son, in order to the forming of his manners, which is making him truly my son, I should be continually putting into his hands some fine poet. The graceful sentences and the manly sentiments so frequently to be met with in every great and sublime writer are, in my judgment, the most ornamental and valuable furniture that can be for a young gentleman's head. Let me add this, that humanity and tenderness, without which there can be no true greatness in the mind, are inspired by the Muses in such pathetic language that all we find in prose authors toward the raising and improving of these passions is, in comparison, but cold or lukewarm at the best. There is, besides, a certain elevation of soul, a sedate magnanimity, and a noble turn of virtue that distinguishes the hero from the plain honest man to which verse only can raise him."

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- "THE TELEGRAPH WIRES," by GEORGE T. LANIGAN, with eleven illustrations.
- "PAUL REVERE'S RIDE," by HENRY WADSWORTH LONGFELLOW, with six illustrations.
- "THE DESERTED VILLAGE," by OLIVER GOLDSMITH, with an Introduction and eight illustrations.
- "OH, WHY SHOULD THE SPIRIT OF MORTAL BE PROUD?" (Mr. Lincoln's favorite poem), by WILLIAM KNOX.
- "THE TELEPHONE," by B. F. TAYLOR, with three illustrations.
- "THE SNOW SHOWER," by WILLIAM CULLEN BRYANT.
- "THE CHRISTMAS TREE," by J. C. SHERER.
- "THE TELEGRAM," by SARAH E. HENSHAW.
- "PROFESSOR MORSE," with portrait.
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Introduction of the Telephone—LADIES AND GENTLEMEN OF THE TELEGRAPH OFFICE DURING THE TRANSMISSION OF A LIVELY WALTZ. DRAWN BY FRANK BEARD.

LIGHTNING FLASHES was originally published, only a few months ago, for the especial delectation of telegraphers, from whom it received a very hearty welcome. The demand for copies from persons outside the profession, however, and the unanimity of the press in commendation of the work, have encouraged the publisher to put upon the market a second edition, intended solely for the general reading public—for people who have no knowledge whatever of the art or business of telegraphy. The book has been entirely re-arranged for this edition, and a large amount of fresh matter, as well as several new pictures, added. It will also be found free from technical terms and professional idioms not familiar to those unconnected with the business, and written in such language as to be readily understood and appreciated even by people who have never seen a telegraphic instrument. It is therefore hoped that LIGHTNING FLASHES, in its present form, will prove of very considerable interest to the general reader, and afford a comprehensive and instructive insight into the mysteries of the electric telegraph, and of the inner life of that great and growing fraternity, the telegraphers, in reference to whose highly interesting history very little has been hitherto known. That an idea may be formed of the interesting contents of the book, extracts from one of the articles will be found on the inside page of this circular, to which the attention of the reader is respectfully called.

LIGHTNING FLASHES is on sale in New York by THE AMERICAN NEWS COMPANY, C. T. DILLINGHAM, D. APPLETON & Co.; Boston: LEE & SHEPARD; Philadelphia: CLAXTON, REMSEN & HAPPELFINGER; and at all first-class bookstores.

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EXTRACTS FROM ARTICLE

Some Amusing Anecdotes of the Wire,

By W. J. Johnston in LIGHTNING FLASHES.

THERE is probably no better place in all this world for studying human nature than in a telegraph office. You are brought in contact with so many different people, made a confident of in so many important transactions, meet so many peculiar people, and see so many strange messages passing over the wire, that you feel as if from some loophole of retreat you were viewing the world shorn of its shams and its pretences. Perhaps no class of men enjoy a good joke better than telegraphers, and they certainly often find in the ordinary routine duties of their position many dispatches calculated to provoke a smile. For instance, a Massachusetts man recently telegraphed to his son: "I am dying; come immediately," which elicited the very sympathetic reply: "Cannot come. Let me know when you die." A message was sent not long since to a doctor in this city from the husband of one of his patients, which read: "Please come down right away; wife very ill," and fifteen minutes afterward another, merely saying: "You need not come. Funeral Tuesday!" The following message, addressed to an insurance agent, recently passed through the Western Union general office in this city:

"Have you received proofs of my death? They were forwarded sixty days ago.

(Signed) JOHN BAIRD, deceased,
per Mary Baird."

As the operator always "follows copy," and senders are often a little excited, very queer messages are sometimes sent; for example this one: "Cousin: Go for Auntie. Father is dying as soon as possible." An Irishman—of course—in Palmer, Mass., sent

the following message to his brother in New York: "Your wife died yesterday. We will wake her to-night. Come home. P. S. Don't open this for two hours, so as to prepare yourself for the melancholy news."

But the most laughable messages are generally those from love sick swains to their sweethearts. A gentleman in the South not long since telegraphed to his affianced in Maine: "Your life is a rich bouquet of happiness, yourself the sweetest flower. If Northern winds whisper Southern wishes, how happy you must be! Good night. Happy dreams, sweet love!—Frank." The following message recently passed through the Chicago office: "I lent you one year ago to-night four dollars eighty-seven cents. If you have not had it long enough, please keep it one year longer." To this delicate hint this answer was returned: "Had forgotten it, and hoped you had. Let her run another year."

Anna Dickinson was once telegraphed to by a lecture committee, inquiring the subject of her lecture. She replied that it would be "Breakers Ahead." The committee telegraphed back, "All right; come and lecture on 'Break his Head,'" which was what the message read after being "improved" by ye intelligent operator.

On one occasion the message "Arrived all right," dispatched by some ladies, was delivered "Arrived all tight." In another case a husband who had gone to the seaside to engage apartments telegraphed "All right; come to-morrow." He was astounded that his wife did not come to him, but the mystery was explained when it was discovered that "All right; home to-morrow," had been the message actually delivered. A member of the Masonic fraternity once telegraphed to a friend to "make room for ten Royal Arch masons, coming to-day;" and on his arrival found a neat pen erected in the yard, the message as delivered asking for accommodations for ten "rams." A gentleman in California was much astonished to receive a

message informing him that "David goes up this evening on a spree." The dispatch originally read, "This evening on Osprey." An Associated Press dispatch published some years ago contained the clause: "Col. Gilbert, a fierce editor of the Valparaiso *Vidette and Republican*." As filed it read, "Col. Gilbert A. Pierce, editor, etc." A New York merchant was once considerably puzzled over a message he received from a correspondent South, saying: "It don't rain mush here."

A grocer who had pursued a runaway clerk named Galusha, and found him with the money, and repentant, telegraphed to his (the grocer's) anxious wife: "Found Galusha. Hope for better things." When she got the missive it read; "Found girl; shall clope and get her things." She started for the scene of action by the first train.

How often the operator in leisure moments ponders upon the sequel of some story of sorrow, of joy, of strange mystery, perhaps of crime, a part of which, and a part only, comes to his knowledge! But for him the unfinished tale is never completed, the mystery never solved. With all his sympathies aroused, he wonders what became of the poor woman who telegraphed a friend to meet her late at night in a strange city, and departed on the train. What did she do when she found no one there, as the operator knew, too late, would be the case, from receiving word that the message was undelivered, "no such person to be found?" And the man who was "in a terrible fix, come quick;" what had he done, and how did he come out?

What with the responsibilities always resting on his shoulders, the constant wear and tear of nerves and patience, the fear of making some mistake that may prove of the most serious consequence, the irksome confinement, the small compensation, troubles on the wire, etc., there is more of prose than poetry in the life of the translator of dots and dashes.

NOTICES OF THE PRESS ON LIGHTNING FLASHES.

A lively and interesting book, sprightly throughout, with some very witty as well as able articles.—*Novelists Bulletin*.

The book consists of interesting stories of telegraphic experiences and adventures, illustrated with numerous mirth-provoking sketches by well-known artists.—*Journal of the Telegraph*.

Many of the authors are well-known writers for the funny columns of our newspapers, and sketches are also contributed by Benson J. Lossing, Charles Barnard, Geo. H. Bliss and others known in the more serious walks of literature.—*American Book-seller*.

Typographically, it is a handsome production, being illustrated with numerous well-executed cuts of excellent design and of a humorous character. The contents consist of a large number of bright, spicy, piquant and humorous sketches from the pens of the best telegraphic writers, who have dressed them in smooth and entertaining language. It also contains an instructive and interesting history of Professor S. F. B. Morse, from the pen of Benson J. Lossing, LL.D.—*Philadelphia North American*.

In its perusal we find able articles from the pens of all the prominent telegraphic writers. In treatment these sprightly writers avoid dry technicalities which make the recital of the multitudinous humorous incidents thoroughly understood and enjoyed by those who have not been initiated into its mysterious ramifications. These authors have also a keenness of perception and appreciation of the humorous side of their business, and a sparkle that at once puts the readers *en rapport* with the subject. The life of Prof. Morse is ably written,

and gives many points not heretofore known in his eventful career. We recommend the perusal of this instructive and amusing work to our readers.—*American Art Journal*.

Mr. Johnston, the compiler, is the editor and publisher of THE OPERATOR, No. 11 Frankfort St. N.Y., a journal devoted to the science and practice of telegraphy, and was the first to give telegraphy a literature of its own. *Lightning Flashes* is filled with sketches by gentlemen who have been contributing to the columns of his paper, and who have become famous as writers in this especial literature. It also contains sketches from several well-known outside authors, and is beautifully illustrated, among other things, by an excellent portrait of Morse, the father of the telegraph, and the first message sent over the wires, with a condensed history of telegraphy. We predict for the book a very large sale.—*Long Island Courier*.

LIGHTNING FLASHES.—A volume of choice telegraphic literature, teeming with humor, fun, wit and wisdom. Its pages are filled with contributions from all the principal writers in the ranks of telegraphic literature, and several well known outsiders. The book is graphically illustrated, on tinted plate paper, and presents many interesting incidents of life to those unacquainted with the duties of telegraph operators. It also contains excellent cuts and sketches of Professor Morse and other prominent men who have been connected with the theory and practice of telegraphy. It is a work of valuable information, spiced with startling and humorous incidents of life, and is the second book published giving telegraphy a literature of its own. The first

was very successful, and we should judge that this one will be fully appreciated by the reading public. Every person who has the fortune to see this volume, will desire to possess it. The field for this kind of literature is much larger and more productive than we realized, and we shall look forward for fresh gatherings of the rich harvest it seemingly affords for charming reading.—*New York Hebrew Leader*.

A PLEASANT BOOK.—"Lightning Flashes and Electric Dashes" is the name of an exceedingly interesting volume recently published by W. J. Johnston, of this city. The book consists of a large number of short, bright, lively sketches, from the pens of the best telegraphic writers, with contributions from several well-known outsiders. Among the latter are Charles Barnard, editor "World's Work," *Scribner's Monthly*, Benson J. Lossing, LL.D., and others. The telegraph business during the last twenty years has grown to immense proportions, and among its members, who as a class are keen, sharp, intelligent men, have been developed many admirable writers. The present handsome volume reflects credit upon the profession, and as an endeavor seems to have been made to avoid all technical terms and expressions not understood by the general public, we think the book cannot fail to have a large sale among outsiders. It does much to dispel that halo of mystery which surrounds the "art telegraphic," and gives one a pleasant insight into the hidden secrets of the telegraph office. The articles are so ably written throughout that all who peruse the book must be charmed with it.—*New York Dispatch*.

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Insulated Telegraph Wires,
200 & 202 North 3d St.

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PHILADELPHIA, PA.

Instrument and Office Wires, Flexible Cords, Annunciator and Burglar Alarm Wire, Elevator Cables.

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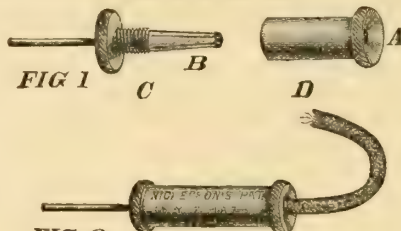


FIG. 2
Nickerson's Patent Tip for Flexible Cords.
Patented May 21, 1873.

Manufactured only by

ALFRED F. MOORE,
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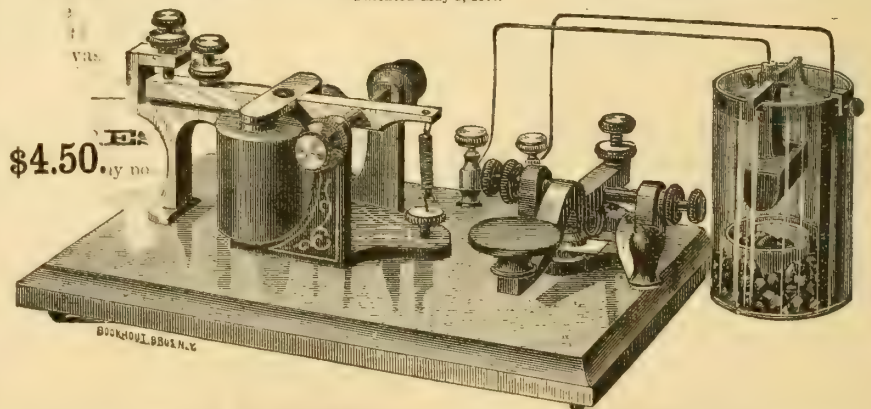
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Patented May 1, 1877.



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The OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

VOL. IX.

NEW YORK, DECEMBER 1, 1878.

No. 23

THE OPERATOR.

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THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY

December 1st, 1878.

Volume IX.

Whole No. 115.

A Love Story.

WERNER.



Young Tommy Myer
Worked on the wire
Where young Maria
Did Lightning throw;
Though he'd ne'er met her,
He sighed to get her,
For worse or better,
For weal or woe.

He'd heard the fable—
Of locks of sable—
And to enable
Himself to prove
His love; and study
Her winsome body
And lips so ruddy,
Declared his love.

The candid beauty
Said 'twas her duty
To accept the suit he
Had proffered; so
He need not fear
To come and see her,
And be her dear,
Her only beau.



That night he started—
Deck'd out, light-hearted—
A-foot, departed,
Eloped, decamped;
With brain on fire
Through wood and briar
To seek Maria,
All night he tramped.

At last he met her—
Resolved to get her—
For worse or better—
When lo! behold!
Her hair like thistles
Stood out in bristles,
Poor Tommy whistles
"Oh, I am sold!"

LAURA.

A STORY IN TWO PARTS.
PART I.

During the summer of the year 18—I was employed as night telegraph operator at a small station called B—, on the line of the Chicago & Alton Railroad. My duties were light. In fact, I had nothing to do except to report to the superintendent's office the arrival and departure of three or four night trains and get orders for them when they were running off regular schedule time. The hardest work I found was trying to devise ways and means to keep from dozing off into the land of dreams.

It was strictly against rules to go to sleep while on duty. Such a proceeding on the part of any operator would almost invariably be followed by immediate dismissal, and the casting of the culprit upon the cold charities of the world. I had to notify the train dispatcher every half hour that I was on hand ready for business, consequently I did not have the best possible chance to steal a wink of sleep. I used to get the most exciting novels I could find to read during the long, lonely hours of my vigil, but I would soon find myself dozing over them. I passed a good deal of my time playing checkers by telegraph with some "artist" in a far distant office. At times, to keep myself awake, I would be compelled to dance around, pinch myself, stick pins in my body, and the like. None but those having had the experience can appreciate how hard it is to keep awake all night, especially in a little, cooped up telegraph office, situated away by itself in the

suburbs of a small village, where not a sound can be heard save the monotonous click, click, click, of the instruments.

One Monday morning at one o'clock I was in a desperate condition. All the trains had passed on time. I was more lonely than usual. Even the instruments had ceased their constant chattering, and the death-like silence that prevailed might almost be felt. I was extremely sleepy, too, but I dare not lay my head down, for if I went to sleep I would be sure to miss sending in my half-hour signals. I had read novels and played checkers until heartily sick of both, and had pinched myself until I was sore all over. Presently I noticed the station agent's pipe lying on his desk, and as a last resort concluded to indulge in a smoke. I was a novice in the use of the weed, but thought the stimulant would "brace me up." So I filled the pipe, lit it, sat down in an easy chair, cocked my feet up a good deal higher than my head, *a la* Yankee, and commenced to smoke. Sinking into a quiet reverie, I reviewed my past life, and had about concluded that the fates had been peculiarly unkind to me, when "a change came o'er the spirit of my dream." Huge "castles in the air" began to rise up before me. I saw myself seated in a magnificent residence, surrounded by all the elegance and comforts which wealth could purchase, and through the smoke that wreathed upward from my pipe, and the puffs that curled up in rings, I could see the lovely face that my imagination pictured of her who was to share all this wealth and happiness with me.

I do not know how long I had been dreaming thus when I experienced that peculiar sensation which tells us that there is some one standing by our side, even though we have not heard a sound nor seen anything. I felt the presence of something, and knew that I was not alone.

Turning slowly around I saw a face more lovely, if possible, than my phantom face which had vanished upward in the haze.

I was startled, and went through some grotesque antics before I could get the kinks out of my body and place myself in a becoming attitude before this vision of holiness, who seemed to have dropped down on my solitude from the skies. When I had partially regained my presence of mind, and was able to articulate a word, I bowed as gracefully as I could, and begged my visitor to be seated.

If she had appeared beautiful to me at the first glance, she was indescribably lovely to me now, as I gazed into the depths of her dark, lustrous eyes, which seemed to throw a halo of unearthly light around the dingy little office, and put to shame the pale flickering light of my lamp, and noted the heavenly smile which played around her classic features. Her hair, which was long, and black as night, hung loosely down her back in waves. She had a long, white lace shawl thrown carelessly over her shoulders, and a veil of the same material, but of finer texture, tied around her head in place of a hat. Altogether she was a picture for an artist as she stood there, and I almost thought that I was gazing on the spirit of another world.

She very soon broke the painful silence by saying, in a voice that startled me by its silvery sweetness: "I presume you are surprised to see a young lady here at this unseemly hour. I came to ascertain if you could get a telegram through to New Orleans, and have it delivered to my father by special messenger at once. It is of the utmost importance that he should get it to-night. It was impossible, or I would have called earlier."

I told her that I did not think there would be any trouble about getting it off immediately, and that I would make every effort to have it delivered without delay. I handed her the blanks, and she wrote out the following message in a neat, legible hand:

"B— STATION, LLL, August 13, 18—.

"HORACE DOUGLASS,

"No. — Street, New Orleans:

"I am happy. You see I have kept my promise to let you hear from me.

(Signed)

LAURA."

I could not see that the message was of any very great importance.

"I promised," she remarked—and I shall never forget how sweetly she looked at me as she said it—"I promised to let my father hear from me at all hazards, and if he should fail to get this message to-night, he will be distressed beyond measure. I will be your ever-grateful friend if you will hurry it right through. Want you to send it collect, too, if you please; my father will pay for it, and all extra charges for delivery at this unreasonable hour."

Now, this was a little contrary to our method of doing business; collect messages are required to be guaranteed unless they are answers or the sender is

well known. I was under a spell, however, and would have sent ten thousand messages and paid for them myself, had she asked me.

Of course I said I would be only too happy to do anything that would accommodate her, and telling her to remain seated, I turned around to my instrument and called St. Louis, which was the relaying point for New Orleans and all Southern business. I soon received an "I," "I," "A," from that office, and sent the message, requesting the operator to rush it through as fast as the lightning could carry it, which he kindly promised to do, saying that it would be at its destination in a flash.

I timed the message as sent (at 2 A. M.), and turned around to tell my pretty customer of my success, when lo and behold, I could see nothing of her. I looked around the office in amazement. I couldn't have had my back turned to her more than a minute, and how could she have gone out so quickly without my hearing her? I could not be dreaming, for there lay the message that I had just transmitted. I thought at first that I might be dreaming a dream in a dream, or something of that sort, but a moment's reflection convinced me that I must be awake. I pinched myself in the same spot that I had been pinching for a week past to keep from going to sleep, and then felt quite satisfied that I was awake, for it caused me to jump clear over a chair and forget for the moment all about ghosts and goblins, black eyes and silvery tones.

I next began to skirmish around the office, examining every nook and corner, thinking that perhaps her ladyship was playing me a joke, and had hidden away. But no, she was nowhere to be found. She could not have gone out of the door, for that was locked and the key in my pocket.

The mystery thickens. How did she get in then? Now, it had never once occurred to me how she had got in. I knew the door was locked, too. I could find no place in the office where any human being could enter or make their exit except through the door, and that being locked, where could my lovely visitor have gone to? Had she vanished into thin air? It looked like it.

I never was a believer in Spiritualism, nor was I at all superstitious, but I firmly believed that I had beheld an apparition. The longer I stood there and thought over it, the more mysterious did it all seem. I grew nervous and trembled in every limb; my head became dizzy, my heart stopped beating, and I fell upon the floor in a state of unconsciousness, where I lay until I was aroused at six o'clock by the arrival of the morning freight train. I got up, but my legs almost refused to hold me, and my brain was in a whirl. I felt that something unusually strange had happened to me during the night, but I could not remember just what it was until I saw the message, which I had sent four hours before, lying on the table where I had left it. I took a long walk, and the fresh morning air did me good; my nerves became steadied down, and my thoughts collected. I made up my mind to write to the gentleman in New Orleans to whom the message signed Laura was addressed, and if there was any such person, to obtain, if possible, a clue to the mystery which hung over me like a pall.

I went back to the office and found the day operator, Tom Duncan, on hand ready to relieve me. He greeted me, as was his wont, with a hearty good morning, and holding up the telegram which he had found, playfully asked me who Laura was. But I was in no humor to tell him anything more than that she was a woman who came to send a message. Tom and I were cronies, and I saw that he was annoyed because he knew I was keeping something from him.

As soon as I was left alone in the office I sat down and wrote a long letter to Mr. Douglass, New Orleans, telling what had transpired the night before, and asking him for God's sake to account for the mystery if he possibly could. I left the letter in the office for Tom to put on the mail train when it came along, and went to my room to seek forgetfulness, if possible, in sleep.

I will not attempt to describe my feelings for the next few days. I was nervous, irritable, and oppressed by anxiety as to the result of my letter to New Orleans.

At last an answer came. I was terrified when I read it, and more shrouded in mystery than ever.

Mr. Douglass wrote that on the anniversary of the night I sent him the message, just one year ago, his lovely daughter had died, and that she had told him a few moments before she passed away that in exactly one year from that night she would let him hear from her, but in what manner she did not know. I will not give the letter in full. It is too sacred a missive to be thrown open to the gaze of

vulgar and unsympathetic eyes. Suffice it to say, that the gentleman was profuse in his thanks and blessings. "For," he wrote, "through your agency peace and happiness have been brought to my declining years. I trust that some day I will have the pleasure of meeting you and rewarding you in a substantial manner, at the same time expressing my thanks and gratitude to you in person."

I did not soon forget my beautiful visitor from the land of shadows, and began to seriously believe that the spirits of the departed were prone to visit this world and hover around those whom they loved while in the flesh, and, under certain conditions, make their presence known. Had I not had proof enough to satisfy me that such was the case? But my mind was still filled with doubts. I wanted more evidence, and I thought I could find this among those who profess to be "mediums." I was too nervous to stay alone all night in the office at B—, after what had occurred, and in a few days went to Chicago, where I visited many mediums and attended many seances, but could not be satisfied. Their performances always appeared like trickery and mockery to me. So I gave up trying to fathom the dark and inscrutable mysteries of the world beyond.

Once in a while the experiences of that night, and what I saw, come vividly back to my memory. I can see the face and hear the sweet voice ringing in my ears as plainly as I did when under their magic spell. But I am beginning to think of it less frequently now—not that I dislike to, however, for I am fond of mysteries, and this one has become my pet.

I frequently hear of Tom Duncan, who, like myself, has become somewhat of a telegraphic traveler, and worked in nearly every telegraph office in the country, but, strange to say, we have never happened to run together. I have a great desire to see the boy once more, and tell him my little story. It has been my secret so long that I want to share it with some one, and, may be, obtain a clue. Tom, I know, would believe what I told him; I cannot say as much for others. It might be wise to have this story published, so that other heads than mine may have an opportunity to study over and solve the mystery, if they can. I gave up all hopes of ever being able to do so long ago. Truly,

"There are more things in heaven and earth, Horatio,
Than ever were dreamt of in your philosophy."

JACK HARDY.

An Important Decision Against the Western Union.

In the United States Circuit Court of this city, November 26th, Judge Blatchford granted an injunction restraining the Western Union Telegraph Company from the further use of insulated telegraph wires. An accounting is also ordered for the damage to be paid for the use of the patent on the insulated wire, at present in use by the company. This is a very important decision, as by the company's own evidence, it has 60,000 miles of insulated wire in use. The Western Union will appeal the case to the United States Supreme Court.

The suit was commenced May 21, 1867, by Clinton G. Colgate, assignee of Arthur N. Eastman, against the Western Union Telegraph Company for an injunction and an accounting of profits for the use of the invention patented by George B. Simpson. The patent claimed the insulation of telegraph wire with gutta-percha, thus creating a submarine conductor of electricity. The inventor claimed to be the originator of submarine cables, and declared that it was to his invention that the success of the Atlantic Cables was due. The attorneys of the Western Union Telegraph Company testified upon the trial that the company had in use about 60,000 miles of telegraph wire in which gutta-percha is used as an insulator.

The history of Mr. Simpson's invention and his struggle to obtain a patent is remarkable. Gutta-percha was imported into England from the East Indies about 1845, and was there used as a mastic cement and as a plastic material for covering reins, straps and bands, and for moulding various articles. Its insulating properties were, however, not discovered at that time. In 1845 Professor Morse attempted to insulate a telegraph wire with beeswax, asphaltum and cotton-yarn. This mode of insulation failed. In 1845 Ezra Cornell and Professor Morse tried to carry a wire across the Hudson River at Fort Lee insulated with asphalt

and hemp, and also one inclosed in glass beads and in a lead pipe. This also failed. Downing's line from Philadelphia to New York tried india-rubber as an insulator and aerial wires in the Spring of 1848, but this also failed. The first Magnetic Telegraph Company, or Southern Telegraph Line, tried wires covered with asphaltum and in lead pipes in the Fall of 1847, at various points on their line, particularly at Passaic River.

It is claimed that the first publication in England of the insulating properties of gutta-percha was made by Professor Faraday in March, 1848. Prior to this time, however, George B. Simpson, the inventor in this case, had filed an application for a patent in the United States Patent Office, claiming the insulation of telegraph wire with gutta-percha. This application was dated November 22, 1847, and was sworn to and filed in January, 1848, more than a month before Faraday's announcement. The inventor at that time was too poor to pay the fee of the Patent Office, and continued to be in the greatest poverty all his life. He filed a second or amended application for the patent in February, 1848, and a third in April, 1849, when he succeeded in paying the Patent Office fee of \$30 by the assistance of the late Horace H. Day. He exhibited his invention in Baltimore in the Spring and Fall of 1848, and it was there tested and found successful. He also, as early as December, 1847, exhibited his invention to the late Hon. Amos Kendall and F. O. J. Smith in Cincinnati. In 1850, his application was erroneously rejected by the Patent Office, and he was referred to the officers of the Magnetic Telegraph Company, including Mr. Kendall, as alleged prior inventors, all of whom, it appeared subsequently, derived the knowledge they received on the subject from him. The Patent Office repulsed his repeated applications. He was compelled to withdraw his fee by his agreement with Day. He worked his way out to the Pacific coast between 1852 and 1857, in the hope of obtaining money to renew and prosecute his application. Returning in 1858, he found his invention largely in use. He had accumulated a little money, and promptly renewed his application for the patent. He was again rejected by the Patent Office, which now confessed that the previous action in rejecting him had been erroneous, but that it was now too late to obtain a patent.

He persevered from 1858 to 1866, filing repeated applications with all the Commissioners of Patents who were in office during that time, and in 1862 presented an application to Congress for relief, and received a most favorable report on the originality and novelty of his invention. Finally, in 1867, after twenty years' litigation in the Patent Office, his efforts were crowned with success, and a patent was issued to him as the originator of the first practical method of constructing an ocean telegraph. Simpson, however, died a few months after the grant of the patent. He was then employed as paymaster in the United States Army—a position procured through the influence of persons who were interested in his endeavors to secure his rights. He died of yellow fever in New Orleans in October, 1867. The patent passed into the hands of the plaintiff, who began suit against the Western Union Telegraph Company in 1872, after fruitless endeavors to have the rights of Simpson's representatives respected. The litigation has proceeded up to the present time, and it is now terminated, so far as this Court is concerned, in the vindication of Simpson's claim to be the originator of ocean telegraphy.

In his decision, rendered Tuesday, Judge Blatchford said: "It is plain from the language of the specification that the point of the invention is to make use of the fact that gutta-percha is a non-conductor of electricity to insulate by means of gutta-percha a metallic wire which is a conductor of electricity, and thus prevent the escape of electricity from the metallic wire, when it is suspended in the air or submerged in water or buried in the earth, when, but for such insulation, the electricity would escape from the metallic wire. The mode of insulation described is to combine the gutta-percha and the metallic wire in such manner that the wire will be covered on all sides with a uniform coating of gutta-percha.

Adequate means of softening the gum and putting it into such condition as to permit it to be so combined are set forth; and it is declared that such mode of combination and insulation confines the electric current to the wire, and shields the wire from contact with all external electric influences. It is manifest that the gist of the invention is the discovery of the fact that gutta-percha is a non-conductor of electricity, and the application of that fact to practical use by combining it by the means specified, with a metallic wire, in the manner described, and then using the cable formed by such combination for the purpose of conducting electricity along the inclosed wire. The answer admits the use by the defendant of submarine cables in the insulation of which gutta-percha was employed, but does not admit that it thereby used the invention patented by Simpson. It also alleges that the alleged invention was before known and used; that it had been, for two years before Simpson's invention, in public use in the United States, with the knowledge, consent, and allowance of Simpson; that if Simpson was the first inventor he willfully and for many years delayed to apply for a patent for it, and the thing claimed by the patent is not patentable subject-matter, and therefore is null and void."

After reviewing at great length the claims and allegations of each side, and quoting many decisions bearing upon the question at issue, Judge Blatchford said: "On all the points at issue it must be held that the plaintiff has established his case, and there must be the usual decree for the plaintiff for an injunction and an accounting with costs."

The officers of the Western Union Telegraph Company do not believe that Judge Blatchford, in entering his final decree, will order an injunction against the use of all wires insulated with gutta-percha. Such action, they claim, would practically confine telegraphing to Manhattan Island, as all the cables are so constructed. It is held that the granting of an injunction in such cases is left to the discretion of the Court, and that, inasmuch as it would injure the public, the company will be permitted to continue its operations as usual by filing a bond to meet all damages that may be awarded hereafter. It is understood that Judge Blatchford will perfect his decree on Saturday, Nov. 30th, and that the case will be referred to a Master in Chancery to make up an account of the money due the plaintiff for the use of his patents. To do this the Master will probably call upon the telegraph company for a list of all the insulated wires in use, and the business done over them. Upon the filing in court of this statement the Western Union Telegraph Company will appeal to the United States Supreme Court.

Dr. Norvin Green, president of the Western Union Telegraph Company, said in reply to a request for his opinion upon Judge Blatchford's decision in the Colgate suit for infringement, that he did not care to say much upon the subject, as it was a delicate one. He stated, however, that the decision was an unexpected one, but the case did not involve one tithe of the amount represented by the newspaper statements. An appeal would be taken at once on the question of Simpson's priority of invention, as a matter of course, without awaiting the accounting of the Master in Chancery, but nothing formal had as yet been done. The counsel of the company had advised that no compromise should be made, as they were confident of success on an appeal.

"We have made a careful estimate," continued Dr. Green, "as to the number of miles of wire belonging to the Western Union affected by Judge Blatchford's decision, and have found that there are 155.1 miles of cable, containing 368.7 miles of wire insulated by means of gutta-percha. This estimate includes the lines of the Western Union in Nova Scotia and the other Canadian provinces (which, of course, will not be affected by an American patent), as well as those lines in the United States. I have not made any estimate of the expense of replacing the gutta-percha casing of our cables with some other insulating substance, but our present cables, with seven conductors, cost us about \$1,000 a mile, and those with only one conductor cost \$400 a mile. The

question of money in the project of replacing our present cables is not as important a one as the question of the time required to make the change."

In reply to questions as to whether there were any other substances than gutta-percha which could be used in insulating the wires, and whether the company had decided on any definite action in order to avoid infringing on Simpson's patent, Dr. Green said that he did not feel at liberty to say much on that subject, as it would be exposing the company's case. He could state, however, that there were several methods which could be used in place of the present mode of gutta-percha insulation, and there was in existence a recent invention which would cost even less to apply than the present method costs. The Western Union Company used gutta-percha in its cables merely because that substance was employed by the manufacturers from whom the cables were purchased.

An application was made November 29th to Judge Blatchford to settle the form of decree of the Court on the injunction, and at the suggestion of the Judge all argument was deferred until Friday next.

Among the Dead Telegraphers.

Friday, November 1st, "All Saints," or "Decoration Day" of the graves of the dead, was observed by our citizens with more of an outpouring of those with "Flowery Tributes" than has been noticed here for many years. Although the public were advised, days in advance, by the physicians of the city that the unaccustomed should stay away from the cemeteries until after cold weather, it seemed as though every lady in the crescent was out, acclimated or not. The Lake trains on Canal Street, and street cars in every direction were literally packed with ladies hanging on to car straps with one hand, and the other hand and arm loaded with bouquets, while the many occupants of the numerous "Cities of the Dead" which New Orleans contains, were thus being remembered by their friends, the many telegraphers who have so recently been laid among them were not forgotten by theirs.

The weather was such as nearly every Decoration Day is blessed with in the "Sunny South;" very bright, warm, and pleasant. As is usual after an epidemic, there was a dearth of flowers, florists having had such a demand for them through the long summer were unable to supply one-third of the applicants, and many who were successful in getting the plainest kind of a dahlia bouquet, paid as high as a dollar and a half for it.

Messrs. Haight and West of the Relief Committee were chosen to look after the graves of telegraphers. In Girard Street Cemetery were found the tombs in which repose Fred B. Moxon and Willis K. Woolf. At the head of each was the name of its inmate, neatly woven in green arbutus leaves, on a pasteboard background; also two large dahlia bouquets, sitting in tumblers of fresh water on each end of the little marble shelves at the head of each vault. Two green wreaths of arbutus leaves, and two bouquets of dahlias were added to their memory by their former companions, who then visited the tomb of A. D. Babbitt, located in Washington Cemetery, No. 1, on Prytania Street. Ladies had been there earlier, and his name was found engraved as were those of Messrs. Moxon and Woolf, with two white dahlia bouquets at the head. These three gentlemen died in the same house on Camp and St. Josephs Streets, and the above respects were paid them by the lady of the house, Mrs. E. L. Roselius, her daughter and nieces. These whole-hearted Southern ladies deserve more than passing mention. During the illness of each of the deceased they ministered to their every want (and in yellow fever the wants are many) night and day, for weeks. Although having members of their own family sick, they left them long enough to attend the funerals of each of the unfortunate boys. Leaving a bouquet of dahlias on "Poor Dick's" grave, the committee proceeded to St. Joseph's Cemetery on Washington Street, and remembered J. J. McDermott with a white tissue paper wreath, ornamented with gold leaf spangles, and a bouquet of white dahlias. The same tributes were placed on the grave of Taylor Adams, in the same cemetery, who died Oct. 16, 1873, of yellow fever.

Washington Street Cemetery No. 2 was next vis-

ited, where Charlie Armstrong was placed in 1876. A wreath and bouquet, same as last mentioned, were dedicated to his memory. The next cemetery reached was Greenwood, on Metairie Ridge, in which, side by side, in Odd Fellows' Tomb, lie Horace H. Hunt and Harry L. Smith, the latter an ex-telegrapher, but of late years on various New Orleans journals. A green arbutus wreath and bouquet were placed on each of their respective tombs. A search was made in this cemetery for the grave of Frank Berry, who died in 1872, but was unsuccessful. The services of the sexton could not be obtained for this purpose, as he was in constant demand by many others seeking similar information.

Opposite Greenwood is the Firemen's Cemetery, where Hugh Irvine is buried. At the head of his tomb was found a neatly printed card inscribed: "Hugh Irvine, died August 24, 1878," which some kind and remembering friend had placed there. One white wreath was all that could be added to his memory, as flowers were becoming painfully scarce as the afternoon of Decoration Day sped on. Thomas P. Gardner, whom many of the northern telegraphers will remember, lies in the same cemetery, and a white wreath was left him.

Masonic Cemetery on Bienville Street and Metairie Ridge was next visited. In this beautiful rest lie the remains of Edward Barnes and his five children, the latter side by side, the sod over them, and the names, "Hattie," "Millie," "Woodland," "Jeffie" and "Robert," worked in chrysanthemums over the grave which they represented, while the plot in which these children were buried was encircled with evergreens interspersed with flowers, each grave divided with a line of the gray moss gathered from the funeral looking trees of the forest beyond. The father lay a few feet to the left of his sons and daughters in the Mount Moriah Lodge tomb. He died September 1, Hattie, September 10, Millie, September 11, Woodland, September 25, and Jeffie and Robert September 28. They were respectively aged 49, 20, 17, 13, 10 and 11 years.

In addition to the above decorations, a wreath for each grave was left by the committee. The last grave visited on the not soon to be forgotten "All Saints Day" of 1878, was that of "Little" Vaughn Allyn, son of our present manager James T. Allyn. This little one rests in the beautiful Esplanade Street Cemetery, and his young life was one of the four thousand offered up to this terrible epidemic in the Crescent City.

The following neat tribute to A. D. Babbitt, is from the New York *Spirit of the Times*:

THE DEATH OF A NOTED SPORTSMAN.

In New Orleans, on the 20th of October, A. Dwight Babbitt, member of Company C., Washington Artillery, an Ex-Union soldier, a gentleman well known as a fine marksman and enthusiastic hunter, was stricken with the fever, and in five short days was numbered with the dead. When the hunter's train is bound for Miller's Bayou and Rigolettes, how often will we miss his jolly laugh with Kate and the gun; we will miss his Shakespearean recitations over the duck supper, his jolly songs, and the bang-bang from his favorite blind at Millers.

He was on the team of the inter-State match, and on the successful team sent to Mobile this summer. He contested with Ed. Manning for a position on the grand inter-State match at New York.

Mr. Babbitt was a native of Michigan, and a brave, noble man. In a few years he had wound himself around many Southern hearts. He has often been heard to say, "he did not see how any one could live in the South, and not be in sympathy with the people." He was noted for his integrity and keen sympathy for the afflicted. Though begged to flee from the stricken city, when appointed secretary of the Telegraphers' Aid Association, he stayed, notwithstanding the pleading of a lovely wife, in a delicate condition, and heroically and most zealously did his duty, trusting in a kind Providence for protection. He was connected in business with the telegraph company and Associated Press.

He was buried with military honors by the Washington Artillery, in full uniform, there being a large number of hunters and noted marksmen present, Dudley Selph, the champion rifle shot of the South, being one of the pall bearers. His different clubs were represented, and it is said to have been the largest funeral of any person dying of yellow fever.

His beautiful, accomplished wife, at her Kentucky home, has the sympathy of many Southern hearts. He leaves no children.

NEW ORLEANS, NOV. 11, 1878.

Telegraphers' Mutual Benefit Annual Meeting.

The eleventh annual meeting of the members of the Telegraphers' Mutual Benefit Association was held in the Western Union building, this city, on Wednesday, November 20th. There was a very fair attendance of delegates, though not so large as last year. A preliminary and informal meeting was held in the secretary's office at three o'clock in the afternoon, and the meeting proper in room 50, at eight o'clock in the evening.

The delegates present were J. F. Morrison, Baltimore, Md.; H. C. Robinson, Philadelphia, Pa.; F. A. Armstrong, Cincinnati; C. C. King, Albany; J. N. Ashley, A. H. Watson, A. S. Brown, W. J. Dealy, D. R. Downer, E. S. Leaycraft, Wm. Holmes, J. D. Reid and R. W. Pope, of New York; W. H. Young, Washington; E. F. Leighton, Boston; J. W. Tillinghast, Buffalo; S. K. Rupley, Poughkeepsie; C. G. Howard, New London; C. L. Lang, Dennison, O.; J. A. Van Dusen, Jersey City; J. W. Kates, Richmond, Va.; H. E. Doolittle, Lafayette, Ind.; D. L. Pike, Syracuse; R. O'Brien, Scranton; H. A. Clute, Harrisburgh, and G. W. Gates, White Plains Junction. John Fuller, of Phillipsburg, Pa., was also a delegate, but was not present.

President J. D. Reid, in his annual report, said that if he mistook not the eleventh anniversary of the Association found its members more united in purpose, more confirmed as to general policy, and more assured of permanence, usefulness, and value as an organization. Mr. Reid continued that he believed that it had added greatly to the strength and permanent advantage of the Association that its progress had been gradual. The officers are exercising increasing care and sagacity in the discrimination of suitable applicants for membership, and a closer and more vigilant guard against the impositions to which the best of institutions are more or less exposed. During the past year twenty-eight deaths have been announced, one of which belonged to the previous year, making a death roll of twenty-seven. Of these, eight fell from yellow fever in the South, but for which the death roll would have been only nineteen, or about one per cent. of our membership. Two of these were volunteers from the North.

Mr. Reid added that the Association had applied to the Board of Directors of the Western Union Telegraph Company to refund the \$2,000 paid to the heirs of the above volunteers, J. W. McDonald of Cincinnati, and M. J. Keyes, of Louisville.

From the report of the Secretary, A. H. Watson, it appears that the number of new members during the year was 222. There were 117 delinquents, 12 were restored, 13 resigned, and there were 28 deaths, leaving the total membership at date at 1,886. The gross receipts for the year were \$27,114, and the expenses \$1,319.35. Fifteen death claims were levied during the year. I call your attention, says Mr. Watson, to the fact that but seven deaths have occurred from consumption, a remarkable falling off from the number last year, and I am convinced that the care now taken in accepting new risks will tend to keep the future death rate from this cause much lower than the average of previous years. During the year five agencies were established, Muscatine Agency discontinued and Wamego Agency transferred to State Line.

The Treasurer reports the total receipts, including balance on hand, as \$33,929.73, and the expenses, including amount paid for \$3,000 Western Union Bonds, death claims and current expenses, \$29,269.35, leaving a balance of \$4,660.38 on hand. The increase of assets during the year were \$1,078.44. The reserve fund consists of \$13,000 of bonds, held in trust by the Western Union. The present value of these bonds is \$1,000 greater than their cost.

An Auditing Committee of three was added to the list of officers; the assistant secretary of the Association was decided to be eligible to membership; a check for \$200, from Vice-President Twombly, of the Western Union, was accepted and ordered to be suitably acknowledged; a vote was taken on the case of J. G. Boyce, who died a short time after his restoration to membership, and whose restoration had been decided by the Executive Committee to have been procured by fraud. The members sustained the action of the Executive Committee in rejecting the claim. The other matters brought before the meeting were referred to a committee.

Thanks were tendered the officers of the Association, and then they were all re-elected for another year. After the meeting adjourned a collection was taken up for the benefit of the widow of J. G. Boyce, and about fifty dollars contributed.

THE OPERATOR

A JOURNAL OF
SCIENTIFIC & PRACTICAL TELEGRAPHY.

W. J. JOHNSTON, - - - Publisher.

December 1st, 1878.

Tell non-subscribers that we will send *The Operator* from the present time until January 1st, 1880, prepaid by mail, with address changed as often as desired, on receipt of \$1.25.

No matter what you want from New York, whether it be in the line of telegraphic goods or not, send the order to us. We will see that you get exactly what you want, and at the very lowest price, never charging you more than if ordered direct, and very often considerably less.

PART second of Jack Hardy's story, "Laura," which will appear next issue, will explain much that is mysterious in part first given in this number.

JOHN FULLER, Assistant Superintendent of the Sixth district of the Western Union Telegraph Company, died at his residence in Phillipsburg, N. J., November 29th, after a protracted illness.

THE best, neatest, and cheapest holiday present that a telegrapher can make, whether to a person in or out of the profession, is a copy of either "Christmas Evergreens," "Lightning Flashes," or THE OPERATOR one year. All three, mailed, only cost \$3.25.

THE synopsis of Mr. George T. Lanigan's "Telegraph Wires," to be found on page 12, will give some idea of that excellent telegraphic poem, and of the manner in which it is illustrated in the new book, "Christmas Evergreens." Of course there is much in the poem that could not, even with the number of cuts used, be got into a single page.

THERE has been some talk lately in this city of the starting of a new telegraph company with Jay Gould at its head. It is, doubtless, more talk than anything else, however. Mr. Gould is probably endeavoring in this manner to "bear" Western Union stock. While we would welcome another good company, we should not care much to have one in which Jay Gould was interested.

THERE is said to be a hitch in the "pooling" arrangement between the Montreal and Dominion Telegraph Companies, mention of which was made in last issue of THE OPERATOR. The Dominion Company, on completing its connection with the lower provinces, reduced its tariff, as announced last issue, without consulting the Montreal Company, at which the latter feels aggrieved.

THE demand for Telegraphers' New Year's Cards has been out of all proportion to our expectation; but we think we would be safe in affirming that if operators could only see how handsome the cards are, the demand would be immensely increased. The cards are really beautiful, and, confidentially, are sold at exactly one-half the price they should be. On account of the large number of orders on hand, all have not yet been filled, but these will receive immediate attention, and orders will now be filled on receipt.

The Electric Light.

A telegram from Washington, to the effect that Edison's application for a patent upon a divisible electric light had been rejected at the Patent Office, was published in the daily papers of Nov. 21st. The ground alleged for the refusal of the patent was that Edison's invention was an infringement upon that of John W. Starr, of Cincinnati, who filed a caveat for a divisible light in 1845. This dispatch was subsequently contradicted.

Starr was a maker of philosophical instruments, and resided in Cincinnati. Had he lived he might have proved as much of a genius as Edison. He experimented on his invention, and went to England to complete it, Mr. King going as his agent, and two gentlemen, Judge J. W. McCorkle, late member of Congress from California, and Mr. P. P. Love, of Dayton, Ohio, furnished the money, about \$3,000. Each was to have a fourth interest in the invention. Letters of introduction were given to King and Starr to the American banker in London, George Peabody, who, when the subject was fully explained to him, agreed to furnish all the capital that would be required to promote the project to a successful and practical use, provided that the same was approved and sanctioned by the best and most celebrated electricians in Europe. Professor Faraday was chosen. In the meantime Starr and King returned to Manchester, where Starr built what he termed a tree, called "The United States." He had on it twenty-six branches or limbs, which he called by the names of the then twenty-six States of the Union. At the end of each limb he had an electric light, covered by a glass globe, on each of which was painted or inscribed the name of each State. Having thus completed his invention, he and King took it to London and exhibited it to the electricians at the Electrical Society, Professor Faraday being present. So perfect was his invention that the Professor pronounced it a perfect success. After the exhibition was over King and Starr went home perfectly elated with the success, and after partaking of a very frugal meal they retired to bed. The next morning Starr, not making his appearance at the morning meal, was allowed to remain in bed, but as the day advanced and he did not make his appearance, King and the landlord went to his room, and not being able to awaken him, they burst open the door, and there found poor Starr dead in his bed. The excitement and overwork of the brain are supposed to have caused his death. From that day to this nothing further has been done with this Starr invention.

Starr filed a caveat in this country in 1845. His claim may be interesting enough to quote here.

"I claim the application of continuous metallic and carbon conductors intensely heated by the passage of a current of electricity to the purposes of illumination. I do not claim the method of lighting wires by electricity, which is well known, as I have already stated, but I claim the method of heating conductors so as to apply them to illumination, the current being regulated so as to obtain the highest degree of heat without fusing the conductor. I claim the method of obtaining an intermitting light for the use of light-houses, in the manner set forth, and for signals. I claim the mode of submarine lighting by inclosing the apparatus in a suitable glass vessel, hermetically sealed, and also the mode of lighting places containing combustible or explosive compounds or materials, as set forth."

His application for a patent was rejected, how-

ever, in 1846, on the ground that the invention was not new, and that there was too much expense in producing the electric light. Mr. Edison says his invention is different from Starr's. He says he cannot patent the divisibility of the electric light, but he can patent the means that allows it. In other words, he can patent a lamp, or any device that will make this division. His application for a patent for a lamp is already before the Commissioner, and is taking its regular course. According to the rules of the patent office nothing concerning it can be divulged. It is understood, however, that it is progressing favorably. Mr. Edison has already received seven patents bearing on the electric light, and has filed three caveats. Five more similar applications are now under way. He has had a man in the Astor Library searching the French and English patent records and scientific journals, from the earliest dates down to the past fortnight, and says nothing like his arrangements has been revealed.

Mr. Edison is making elaborate preparations to introduce and experiment with the electric light. He purposes to commence at Menlo Park with 2,000 lights, using telegraph poles with fifteen lights on each arm. This experiment, including the cost of the buildings, engine, generating machines, and everything, is estimated at from \$100,000 to \$125,000.

A Mr. Werderman, of England, recently gave a public exhibition of an invention for lighting with a divided electric current. The current was generated by means of a two-horse power Gramme's plating machine, and was conducted along a cable serving to light two lamps, stated to have the illuminating power of about 360 candles each. The light, which was perfectly steady, and in the room was soft and sun-like, could be looked at without discomfort, though it was not shaded. The next thing, the larger lamps being extinguished, was the exhibition of ten smaller lamps, fed by the same current. From the cable, which might be said to represent a gas main, a wire, answering to a service-pipe, ascended to the positive electrode of each light. The construction of the lamp may be thus described: An upright rod of carbon (the positive electrode), resembling an ordinary slate pencil, touching the centre of the under side of a disk of carbon (the negative electrode), which was somewhat like a half pound weight. Briefly, the lamp may be roughly compared to a common weight balanced on a sharpened slate pencil. A balance suspended from the apparatus served to keep the positive electrode in its place as the carbon would be consumed. Another cable and a special wire united all the negative electrodes, and at the last lamp the current went to earth. The connection having been made, the ten lamps were at once lighted; each light was stated to be of about forty-candle power. The lamps burned steadily, with a beautifully soft and clear white light. First one of the ten lights was then extinguished, and afterward a second, the only effect on the remainder being that they became slightly more brilliant, as gas will sometimes be under similar circumstances. Mr. Werdermann explained that this would not really be the case, as there would be an arrangement by which, on the extinction of a light, the current would be directed along a supplementary wire equal in resistance to the consumption of the light, so that the resistance in the case of the other lights on the circuit would remain unaffected.

Mr. Werdermann, with the aid of diagrams, explained his invention. It was well known, he said, that when they burned an electric light of two carbons, one carbon burned out in a crater, while the other burned to a point; thus the one carbon was consumed twice as fast as the other. It occurred to him to find out what change would take place if he varied the section of the electrodes—that was, if he made one carbon smaller

and the other larger. He then discovered this curious fact, that when he had an electric arc of one inch he could not maintain that arc if he diminished the section of his positive carbon. He went on reducing the section or magnitude of his positive carbon, the electric arc becoming lessened in regular proportion, until the difference of section of the two electrodes was as one to sixty-four, and then the electric arc was so far reduced as that the two carbons were in contact. As the section of the positive carbon was diminished, the glowing portion of that carbon increased in length, while the heat imparted to the negative carbon was reduced. In effect, when the sections of carbon had reached the relative proportions just stated, and were in contact, the electric arc was infinitesimally small, the negative electrode was not consumed, while the positive electrode was incandescent. Light was therefore not only supplied by the electric arc, but was also furnished by the incandescent carbon of the positive electrode. It then only required a simple mechanical arrangement to keep the positive pole, as it consumed, in regular contact with the negative pole, and the difficulty which had hitherto stood in the way of using a number of lights from one current was overcome.

Mr. Edison says that the Werdermann light neither forestalls nor conflicts with his invention. He uses no carbons, and his lights do not burn out. Werdermann's, however, he says, is a good thing, and allows more subdivision than Job-lochhoff's, but the maintenance of attention and consumption of carbon cost more than the horse power used to keep it running. The light, moreover, does not allow, Mr. Edison says, of a reliable subdivision.

We publish on page nine of this issue a (to us) very gratifying communication from a Canadian reader. Such a letter, coming, as it does, from an almost absolute stranger, is about the neatest compliment that the gentleman could possibly have paid us. We flatter ourselves that many readers of *THE OPERATOR* indorse this correspondent, and if so, the letter indicates a feeling of warm personal affection between the readers of *THE OPERATOR* and its editor that it shall always be our desire to cultivate and encourage.

MR. JAMES D. REID'S book, "The Telegraph in America: Its Founders, Promoters, and Noted Men," is out. It is a large octavo, 846 page volume, and contains a history of signal telegraphs, the dawn of electrical discovery, progress of electrical science in America, early life of Prof. Morse, birth of the recording telegraph, its struggle and success, together with a history of the several telegraph companies started in America, with a history of the men prominently connected with each. The book contains 16 handsome steel engravings and 29 wood-cut portraits of persons prominently connected with the introduction and practice of the electric telegraph in this country, and is a book that cannot fail to be read with deep interest by every telegrapher. Derby Brothers, 27 Park Place, New York, are the publishers, and the price is \$6, \$7, \$8, and \$10 a copy, according to binding. Mr. Reid, however, reserves the right to supply personal friends and operators, to whom he will sell copies at \$5, which represents the cost of the book. To operators recommended by their superintendents Mr. Reid will send the book on monthly payments of one dollar. Mr. Reid's address is P. O. Box 3,393, New York.

WESTERN UNION stock, on Tuesday last, declined from 95½ to 94½. The immediate cause of this movement was the decision rendered by the United States Court against the company, in the suit involving the company's right to use wires insulated by gutta percha. The importance of the decision is shown by the company's testimony in court, that it had in use 60,000 miles of such insulated wire. This kind of wire is used not only in crossing rivers, etc., but generally whenever a wire is placed inside of buildings, dwellings, offices, etc. After the break in price a report obtained circulation to the effect, first, that no such decision had been rendered, and, next, that it was a matter of small importance, involving not over \$100,000 at the most, and on these statements the price rallied to 95½, but again quickly yielded to 94½ to 94½. Western Union is now quoted at 94½, and A. and P. at 28½.

Something New.

At this late day telegraphically, any material improvement in either the relay, key, sounder or switch is noteworthy, inasmuch as the best practical talent in the country has for years been devoting much attention to perfecting these four instruments, constituting, as they do, the complete instrument equipment of every telegraph office.

Our attention has been called to an extremely simple and apparently perfect device for the switch, which seems to be calculated to entirely supersede the plug switch, spring jacks, loop plugs, and all others of the well-known contrivances for looping in instruments, batteries, wires, etc. We understand that Gen. Thos. T. Eckert, Frank L. Pope, and several of the best practical electricians of this city who have seen it, predict its prompt and general adoption for telegraph, telephone, and American District offices, large and small. It is the invention of Mr. Jesse H. Burnell of this city, whose "giant sounder" is so popular, not only in this country, but also in England, where it has been adopted as the standard sounder on the Governmental Lines.

Mr. Bunnell has applied for, and will doubtless receive, a patent for his improvement in the switch, a complete illustrated description of which will appear in the next number of *THE OPERATOR*.

Echoes from 197.

Miss Shaw works F. A. Hotel wire.
Minnie Frazee works 52 short, and signs "Fg."
Miss Seaver has returned, after a six months' vacation.
Mrs. Mortimer Brien is subbing at the Stevens House.
Fancy work is again permitted in the ladies' department.
Miss Tillie Wood of the C. N. D. has resumed duty after a long and serious illness.
The Chinese Embassy visited the operating room November 27th, and created a sensation.
Statistics of 165,000 deaths in Massachusetts show that lady operators die at the age of twenty-six, and male operators at twenty-eight.
Superintendent Kates of Richmond, Virginia, visited the operating room on Nov. 23d, and paid his respects to many of his old subordinates.

To obviate the necessity of reducing the force, operators in the main office are expected to each take ten days' vacation during the ensuing winter.

Mr. John Brant has suffered a severe affliction in the loss of his wife, a very estimable lady, who died at Southport, Connecticut, Nov. 28th. We extend our sympathy.

W. J. Ives, Superintendent of Government Telegraphs in the U. S. Senate, visited Francis Murphy's temperance revivals in the Seventh Street M. E. Church last week, and related his experiences.

To bring in the millennium all that is necessary, says Mr. Talmage, is to convert the telegraph operators and the editors. It is really difficult to see

what these classes have to do with the wickedness of the world. They certainly have not time to be running around Gotham at midnight like the distinguished Brooklyn preacher.—*N. Y. Herald*.

What is Thought of "Christmas Evergreens."

Below we give a few opinions of individuals in reference to "Christmas Evergreens." Next issue we shall quote a number of press opinions:

"It is very nicely got up in every way, and does great credit to you."
James Dakers,

Sec. Montreal Tel. Co.
Montreal, Nov. 23."

"'Christmas Evergreens' rec'd, and the book well deserves the praises which it receives from everybody. It cannot do otherwise than please."
Percy, Wyo., Nov. 23. C. A. B."

"The new book is truly worthy of the whole tribute paid it by 'John Oakum's' champion pen. Its tasty appearance elicits happy expressions of appreciation from everybody."
M. W. Russell,

East Saginaw, Mich. Nov. 25."

"It is a very handsome volume, and reflects great credit upon its publisher. I earnestly hope that the book will meet all the success it deserves, and that your greatest expectations may be fully realized."
W. A. Austin,

Albany, N. Y., Nov. 26."

"The collection is truly from the rarest gems of literature—a charming cluster, making a most welcome Christmas offering between friend and friend. The 'Evergreens' are beautiful—your taste is perfect."
D. C. Shaw,
Portland, Me. "Onay Gagin."

"'Christmas Evergreens' is truly a handsome book, and those who would have their memory 'Ever green' in the hearts of their friends should procure this beautiful book for a holiday gift."
H. Y. Bresee,

Binghamton, N. Y. Nov. 20."

"P. S.—It is better still than that. F.W.G."

"'Christmas Evergreens' came to hand in good shape. Am very much pleased with the book, and see no reason why it should not have large sales. It's the best and nicest book of the kind I have ever seen at the price. Hope I may be able to get you many orders for it."
C. A. Scheffer,
Eimira, N. Y. Nov. 21."

"I fully indorse what the *Graphic* says of 'Lightning Flashes.' Of 'Christmas Evergreens' too much cannot be said in favor. It is a very fine collection of poetic gems, many of which are too well known to require praise. The book is throughout extremely interesting. The engravings, print, paper, binding and general finish are as handsome as could be desired."
C. E. A.
Mamaroneck, N. Y., Nov. 21."

The book seems to have touched a responsive chord in the heart of Mr. Dechant, of Reading, Pa., who, immediately on seeing a copy, got off and forwarded us the following:

"Christmas Evergreens—emblems dear,
And most appropriate the time of year,
Come to us, a pretty gift;
From press to life just freshly rift,
A shower of beauties, it displays,
Thrown out to us, in perfect maze
Of poetry, in type so clear
That we imagine we might hear
The stories told, of wire and rail;
Near Concord town, the laden hail—
Of life departing as the flake—
Silently, softly, in the lake—
Of scenes on rural village green;
Deserted, waste, for kindly sheen—
As maiden gleams in early day;
So we know this sweet poem may
Of song, of fate, and life beauty;
Of spring, of year, of day, and duty,
Withal unembellished with such grace,
Each poem's pretty better face,
Display'd with such a modest mien,
Straight loved the book must be when seen."

The Western Union Time Ball.

What's the hour? In these words the time query was anciently put; and the answer named the hour, never the minute. Exact time recorders were unknown to the multitude; time was estimated rather than measured; and anything within the hour was practically close enough. The almost disused proverb, "It's always ten until it's eleven," remains to tell of the carelessness of our great-grandfathers in this respect.

Washington's reply to his secretary, who had delayed an important meeting half an hour, and tried to excuse himself by saying that his watch had lost half an hour, "You will have to get a new watch, or I a new secretary," shows that the day of the proverb was then well past. Had the watch been only a quarter slow, the excuse would probably have been accepted.

With the increasing perfection of time-pieces, and the extension of the custom of carrying watches, the limit of tolerable variation was soon reduced to five minutes, or even less; yet the time is within the recollection of most men when, were a man to give the odd minute in response to the question, "What is the time?" he would be laughed at as a prig who wanted to show off his watch as something uncommonly fine. Now it is no unusual thing to hear men name the nearest second, and qualify the remark by saying that their watch is two or three seconds fast or slow by the time ball or some other popular standard. Away from our commercial manufacturing centers so great a refinement of time measurement may seem to be needlessly nice. What odds can a minute more or less make any way to an easy going farmer or laborer? The odds may be very small indeed, but the traveler does not think so when he misses an important train by being a minute late, nor the merchant whose notes go to protest because his messenger is that much behind time. Where large and complicated affairs are being carried on, as in railway management, the time element becomes vitally important; and in this connection the railways of the country have been a powerful means of popular education.

It was from the necessities of railway management, indeed, that the electric time service grew up. The safety of life and property demanded that the servants of each road should not only have trustworthy time-pieces, but that they should all be regulated by some common standard. The history of the development of the electric time service for railway purposes, however, does not fall within the scope of this article, though it would be well worth recording; our purpose is rather to describe and illustrate the special application of the service to this city.

Allusion has been made to the time ball. Many of our distant readers may not know that the standard time of this city has for some months been determined by the dropping of a ball above the Western Union Telegraph building, at the corner of Broadway and Bey Street, precisely at noon each day, and few of those who daily avail themselves of the means thus afforded for regulating their time-pieces understand the mechanism by which the ball is dropped at the right moment by an operator seated in the National Observatory at Washington, two hundred and forty miles away.

Though from a distance the time ball appears to be solid, it is in reality composed of a dozen thin vanes of sheet copper disposed radially, half of them semicircles, the rest crescents. By this device the visual effect of a solid ball is secured, with the least possible resistance to the wind, or to the air when falling. The ball, which is 315 feet above the street, falls 23 feet, and is received by six plungers, which enter the closed cylinders attached to the ball, providing as many air cushions for the arrest of the motion of the ball without the shock. The moment the ball begins its downward course is noon.

The operating of the ball is a matter easily explained. Five minutes before noon the officer in charge of the station raises the ball nearly to the top of the pole. This is done by means of a drum fixed at the right hand end of the table; the cord from the drum passing upward through a box to the foot of the tower, thence through the air to the top of the pole, where it passes over a pulley and is attached to the ball. Two minutes before noon a signal is received from Washington that all is ready, whereupon the ball is raised to the top of the pole, and the crank removed. The ball is now held in position by means of a lever, one end of which engages the ratchet wheel of the drum, the other being caught in the notch in the little standard to the left. The latter is attached to the armature of

an electro-magnet, which is placed in telegraphic connection with the National Observatory at Washington. At the moment of noon, New York time, the officer in charge at Washington closes the circuit: the armature is retracted, the lever disengaged, and the ball drops. The instant the ball reaches the base of the pole the fact is automatically reported at Washington through an electric device for that purpose. Owing to the great height of the ball when raised, it is visible for many miles around; and directly or indirectly the clocks and watches of some two millions of people are thereby kept from straying far from the true time. Even as far off as Bayonne, N. J., according to a local paper, the principal of a public school regulates his clock daily by the falling ball. The ball and its discharging apparatus were designed by Mr. George M. Phelps, Superintendent of the Western Union manufactory. The public service thus rendered by the Western Union Telegraph Company is wholly gratuitous, and affords not only a notable illustration of the public spirit of our great commercial corporations, but also an illustration of the far-reaching indirect benefits which applied science is constantly conferring upon modern life, free of expense to the recipients.

But the time service does not end here. To reap the full benefit of the time ball, a great number of people must watch for its fall; that takes time, and time is money. It is cheaper to employ one man with a little machinery to regulate the time of all, and the service is much more surely attended to. Accordingly, Mr. J. Hamblet has introduced a system of constant time service, by which our clocks may be kept constantly under the electrical control of a central regulator or standard clock, which is kept in exact time with the clock of the National Observatory, due allowance being made, of course, for the difference in geographical position.

The central regulator is stationed in the Western Union Telegraph Company's building, and is so constructed as to keep time with the highest attainable accuracy. In addition, it is every day compared with the clock of the National Observatory at Washington, and checked by the daily time observations made at the observatories at Allegheny, Pa., and Cambridge, Mass., with which it is in telegraphic connection. By this it must not be inferred that the clock in question is kept in exact accord with either or all of the observatory clocks, that being a mechanical impossibility. The range of variation, however, is kept within a few hundredths of a second.

The reader must not be incredulous; it is possible to measure, nay more, to record, the hundredth part of a second. A chronograph, used in comparing the standard clock with the clock of the Washington Observatory, is electrically connected with both clocks, and records the pendulum beats of each on the strip of paper. If the beats are exactly synchronous, the dots stand side by side on the paper tape of the chronograph. If the beats are not synchronous, the dots will be separated by an interval, long or short, according to the difference of the clocks—that is, the difference in time between the beginnings of corresponding beats—and the speed of the chronograph. Supposing the clock to be beating seconds, and the chronograph to discharge an inch of tape each second, it is obvious that the dots recording the beats of each clock will stand one inch apart. It is obvious, too, that the lineal space between the recording dots of two clocks not beating exactly together can easily be measured, and thereby the difference in time exactly determined.

The next step in the time service is to distribute the accurate time thus maintained to such as want it, which is done through an electrical attachment to the standard clock. This controlling clock was constructed by E. Howard & Co., of Boston, from designs by Mr. Hamblet, and has a Dennison gravity escapement. The wheel in the center with the second hand revolves once a minute. One of its thirty teeth has been filed away, the vacant space causing the omission of the tick which would otherwise mark the fifty-eighth second of the minute. The remaining teeth act upon a delicate jeweled spring, which breaks an electric circuit at the passage of each tooth. The two wires connecting with this spring and its banking operate a relay, and through it a sounder, which indicates the beginning of each minute by a pause of two seconds. The beginning of each five minutes is identified by a pause of twenty seconds, obtained through the agency of the five minute wheel to the left of the seconds wheel. At each revolution of the five minute wheel the lever at the top drops into the notch in the wheel, making electric connection between the two wires governing the relay, thus preventing

the minute wheel from breaking the circuit for the space of two practical seconds.

The practical advantages of this constant and trustworthy time service will appear to any one who has to do with important commercial or industrial affairs. One of the great sources of friction in social and business intercourse is time variation and uncertainty. The maintenance of a common and authoritative standard will go far to lessen such friction, to the great time-saving of all classes, and the prevention of many mistakes and misunderstandings. Where thousands are engaged, delays of no more than a minute at a time amount in practical effect to the loss of hours, days, even months of individual labor. In a factory employing only three hundred men, a variation of one minute in the signal for starting and stopping means the loss of one man's work for a whole day.

The immediate direction of the New York Time Service is in the hands of Mr. Hamblet, Room 40, Western Union Telegraph Building. The business generally is controlled by the Gold and Stock Telegraph Company. —*Scientific American.*

What Shall We Read?

The American public is an omnivorous reader. He who travels on our railroads finds all his neighbors busy—their journeys long or short—reading. The newsboys find ready sale for their wares, and every purchaser settles down into his business of reading. Foreigners note this habit of ours with surprise. No such thing is seen in the countries across the water. Our own publishers—of newspapers and books alike—know it, and turn their knowledge to profitable account. Newspaper men, not only rake and scrape the four quarters of the globe for news, but charter and run railroad trains at their own expense to get their material—often very questionable in quality—into an early market.

Book publishers are catering to the habit of railroad reading by publishing the works of the best writers in neat and handy form, so as to be held easily in the hand, and carried conveniently in the pocket.

Osgood & Co., of Boston, have contributed to the convenient literature of this shape a cluster of gems in the "Vest Pocket Series." This is a collection of articles, essays, and poems from the best modern authors. They cost bound in cloth but fifty cents each, and are marvels of durability, excellence, and neatness, as well as cheapness. Among them, the first of them are "Snow Bound," by Whittier, "Evangeline" by Longfellow, and "Culture, Wealth, and Beauty," by Emerson. Each of these names is a sufficient guarantee for the contents of the little volume upon which it appears, and it seems to me that no generous and gentle reader can afford to be ignorant of them. The Harpers have outdone Osgood in the cheapness of their contributions, and equalled them if possible in the value of their selections. In the "Half Hour Series," unfortunately, they are bound in paper, and cannot be so durable.

Appleton & Co. now advertise "The Handy Volume Series" made up like the others of selections from the best authors, and embracing essays, poetry, and fiction. All this is to gratify the desire of the traveling American public to read. The houses I have named not only know of the American habit, but desire to furnish material which shall make the reader while the book is being read a happier man, and when it is done a better man.

I presume that among all the different classes of American society there is none embracing more voracious readers than the telegraphic fraternity. Among railroad operators, at least, time is often more abundant than employment, and hangs heavy on the operator's hands. To such, a paper is a god-send. If the best newspapers were always read this would be well; but, unfortunately, among the newspapers of the earth but few are of such a character as to produce a missionary spirit in their readers. Here and there one blossoms out into strength and beauty, but they are rare. The *New York Tribune*, considering the literary excellence (of the political excellence leave every man to be his own judge) of its editorials and criticisms, the careful censorship exercised over the news department and advertisement page—the judicious selection of its fiction, and the critical watch kept over its political columns—is in my opinion beyond all comparison—the neatest, cleanest, best sheet published in America as a newspaper—perhaps the best in the world. With that one paper as a newspaper for the general reader, I should stop.

Can I say a word for our own OPERATOR without

doing violence either to your modesty or mine. If I may it shall be this. That the telegraphic operator who takes no professional journal has too little pride in his personal improvement to be of much service to the company he works for, and I know will never see these remarks, so I shall not appeal to him. I talk, now and then, with an operator who at first seems possessed of a generous culture, and find, to my sore disappointment, that it is all superficial—mere newspaper polish which a few moments' conversation suffices to rub off. Like stove blacking it makes a pretty gloss, but it won't soak in. Such a man carries a convenient assortment of slipshod quotations—like a country pedler's stock of "washed" jewelry, and with the same result. They look well, but they won't bear a close inspection. He quotes a poet. I am interested, and undertake to pursue the subject. He dodges me for awhile, but at last—cornered—confesses he has never read him. He found the couplet quoted in some newspaper, and remembered it. I subside, wondering how the man can have so fine an apprehension of the beautiful and true as to see the fitness of this fragment of a poet's thought—commit it to memory, and yet lack the desire, where the ability is so cheap, to know him better.

I find operators better posted generally in Shakespeare than in any other poet—that is, in the sense of being familiar with his plays and his words. I suppose this is because they hear him quoted so often by ranting stage actors. To know Shakespeare thus may be better than not to know him at all. If so, I am ready to be convinced, but as the old fellow said, "I'd just like to see the fellow who can convince me." I venture to affirm in the face of four hundred years of wrapt devotion at the Shakespearean shrine that almost any other English standard poet may be better read by the average mind than he.

As an American and an admirer of American genius and American greatness, I assert that there is no more profitable position than that which sheds the ray of the evening lamp upon the gentle page of Whittier, or the polished lines of Longfellow. He who wades through the shifting scenes of Julius Caesar, or spends his sighs in sympathy with the fictitious sorrows of the melancholy Dane, while he knows nothing of the beauties of "Snow-Bound," or "Evangeline," simply crosses the Atlantic to get a drink. This I say, not that I love Shakespeare less, but Longfellow and Whittier more. Shakespeare was, indeed, a man of marvellous intellect, but it was of that metaphysical, subtle character—profound—would perhaps be a better word—which makes the study of its play of meaning the labor of a great mind, not the pastime of a little one. And I really do think that of all men, no man can be or is (if he knows anything of what passes here) more surprised than he at the multitudinous meanings and shades of meanings given to his words, of which he had when he wrote them no thought at all.

The poetic field is wide, and ever enlarging its bounds. We shall never have another Milton. There will never be another Dante. The civilization which produced them has passed away—it not with them—after them. But, perhaps, better for us, we may have Burnses, and Moores, and Bryants, and Tennysons in plenty in the years to come, and who doubts but that with the narrowing circle of poetic flight will come a wider circle of reading. I leave the question of which is the better, heavenly poetry and earthly reading, or earthly poetry and earthly readers both—an open one.

But the scientific field has not been left untilled, and there stands there such names as Tyndall, and Huxley, and Darwin, and Herschel. In metaphysics we find Spencer and Bain. In fiction the field is boundless. But let not him who has not read Walter Scott, nor Washington Irving, nor Kennedy, nor Hawthorne pretend to literary culture because he has read Mrs. Southworth or Charles Reade, or Augusta Evans. History opens its doors, and lays before us the heaped-up records of the wisdom and folly, the guilt and wretchedness, the benevolence and intolerance of man for six thousand years.

Bancroft, and Prescott, and Motley of our own country have heaped high a store of the most attractive reading for us, who have now but to follow after them, and gather up the shining polished gems they obtained with such infinite pains and labor.

Let not him who reads, however, care only for what he shall read; but let him concern himself also as to how he shall read. And let no one with these mountains of literary riches lying around him for the gathering, go like a shiftless beggar about among men, quoting extracts and newspaper garblings from poets he has never read.

SUMAC.

BOND HILL, O., Nov. 11, 1878.

A Highly Complimentary Letter from the Dominian.

"This is the place. Stand still, my steed—
Let me review the scene."

A first glance at the title-page of "Christmas Evergreens" suggested the above couplet, but a careful examination of the book in all its details—printing, binding, illustrations, and contents—forced the conclusion upon me that an abler pen than mine would have to herald its excellencies. What can be said of it more than simply this—beautiful?

John Oakum's graceful and flattering indorsement will, I am sure, have prepared for it a hearty reception from the telegraph fraternity, and it only remains for those operators who may be fortunate enough to secure a copy, to introduce it to their friends, to insure for it equally as hearty a welcome from them. That it comes to us invested with peculiar charms is quite natural from the fact that we are so closely allied with its publisher; but a glance at its pages is all that is necessary to enlist public patronage, and, as John Oakum says, "make them open their purses and buy."

While I cannot command language expressive of its intrinsic value as a work of art, looking at it as you tremblingly cast it upon the sea of public opinion, not from a mercenary motive, but from the sublime standpoint of a desire that whatever meed of praise should be showered upon it, whatever degree of favor it might merit, should be considered a tribute to the status of the telegraph profession, in the up-building of which you have been so esteemed and honored an agent—looking at it as "bread cast upon the waters," the return of which would tend to hand your name down to future generations as an ardent worker for the promotion of our interests and the elevation of our calling—I think every operator in the land ought, with me, to feel justly proud, and hail its appearance with joy.

Glancing back a few years' to the time when your real struggle began, when you threw off the yoke of oppression, and stood boldly alone as our champion in the cause of Right against Might, and noting the great progress the paper, then firmly established, has since made in the field of telegraphic journalism, we see dawning upon us the fruition of those aims and desires that then prompted you to attempt the task of giving telegraphy a literature wholly its own. In this retrospect there must be much that is pleasing and encouraging to you, for you must have felt the great heart of our fraternity throb in unison with your own, as hundreds of our rank and file flocked to your side, and nobly seconded your efforts. And what have been the results? We see, in addition to a first class paper, "Lightning Flashes" and "Oakum Pickings," books purely telegraphic in their character, opening their pages to the world, and revealing the fact that there are within our portals men of ability and sterling worth, who only require a little "inspiration" in order to enlist their aid and enable their good qualities to become known. That these publications have been the means of elevating our own opinion of ourselves, I have not the slightest doubt. In fact, the amount of "real good" they have done will probably never be known; but I am thoroughly satisfied that telegraphic morality, if I may so speak, has, through their influence, been steadily tending upward during the last few years, and it does not require an eye of prophetic vision to discern the near approach of the day when our claims to the respect that our high and honorable calling should insure for us will be duly recognized.

In "Christmas Evergreens" you have given us something through which we can appeal to the public, and thus bring ourselves more immediately under their notice. While, as telegraphers, we have but sparingly contributed to its contents, there is that in the circumstances surrounding its publication which gives us a fatherly feeling concerning it, and we may justly be pardoned if our zeal makes us egotistical on this point.

"Christmas Evergreens!"—a sweet name; a pretty book. It comes to us, at this happy season, brim full of fragrant things, gleaned from the gardens of the Beautiful and the Good. We hail it as a peace-offering to the outside world, by which we would seek to remove those prejudices which may or may not have been justly cherished against our numbers through the misdeeds and shortcomings of a few. We gladly give it a place beside the other and earlier evidences of our march of improvement, and heartily bid you God-speed in your devoted endeavors to bring to light the better side of the life of the telegraph operator.

May the recollection of these labors of love stir up the lukewarm, and infuse a longing desire, ac-

companied with a determination to "arise," into the hearts of the erring and wandering prodigals, and be the means of lifting up and giving back to society and friends many who are now aimlessly journeying in a "far-away country."

J. S. MCC.

Old World Telegraphic Matters.

It has often struck me as peculiar and odd while perusing with enjoyable gusto your enlivening and instructive OPERATOR, with its numerous intelligent and racy correspondence from the most remote corners of your wondrous continent, that I never lit upon even the smallest bulletin or tiniest scrap of gossip from the teeming center of European telegraphy—our chief telegraph office, St. Martins-le-Grand, London, England.

Surely, the American operators, our professional "kin beyond sea," feel some interest in a huge beehive containing about 1,500 male and female co-workers on the arid plains of electrical manipulation, who "run" nearly five hundred instruments of all kinds, Morse, Wheatstone, and Needle; Duplex, Quadruplex, Contraplex, and Multiplex—a band of "Lightning Flashers" who get rid of several million of words over the wires every twenty-four hours, and come up smiling when duty calls, to struggle daily in the most undaunted manner with more and more verbal millions!

This being taken for granted, then, it gives me unbounded pleasure to open my humble budget (as a lowly denizen of the telegraphic "hub" aforementioned) by acknowledging with unmixed satisfaction our gratitude and indebtedness to the U. S. for sounders! Three or four years ago a sounder was regarded by most of us as an objectionable hybrid apparatus, to be approached only with dread and distrust—a species of cross between a Morse recorder and a "bell" instrument which requires a special talent and phenomenal formation of the tympanum to control, and a lifetime's practice to be able to read from with anything like confidence! The diffidence and shyness with which the strange apparatus (three or four specimens of which had at that time been forced upon us) was viewed by those gifted individuals condemned to work them; the respectful awe the onlookers felt for those splendid beings who did work them, it is impossible to describe. Now, presto! the sounder is the order of the day. Since Messrs. Fischer and Prece, our Controller and Electrician, visited America some twelve months back, there have been fitted up scores of sounders, and the cry is still they come. Nearly all our recorders have been or will be converted to the auricular system, and it requires no prophet to foretell that this trans-Atlantic importation will shortly supersede entirely the wearisome Morse recorder in Great Britain. The most curious feature of this transformation is that even our oldest and most conservative operators have discovered that their ears, after all, are more properly, and, so to speak, sounderly, constructed, than they imagined, and, far from being repelled by the new method of receiving, they absolutely revel in it, and look upon the "pony sounder" as a thing of beauty, and a telegraphist's joy for ever, or nearly ever!

Another American gift which also enjoys great popularity is the "Quad." We took to it with ever Edisonian idea most kindly, and flatter ourselves (probably wrongly) that we rivaled the greatest total on your side ever reached Quadruplexically when we sent and received from London to Liverpool (200 miles), an average of 206 messages of thirty words each (mark that, please) within the hour. Mr. Gerritt Smith, in London, and Mr. Hamilton, in Liverpool, witnessed the exploit, and being American telegraphists, were somewhat astonished that Britishers could foot up so well. The "Quad," I am glad to state, is working satisfactorily, and being extended as rapidly as possible to our busiest centers.

I suppose it must be that American telegraphy does not require it, but I confess that some surprise is felt here that Automatic apparatus is so little used in the States. Britain employs some hundreds of Wheatstone's Automatic instruments with the greatest success, which, when duplexed, can get through more work than even the "Quad." All our news is sent by this method, one perforated slip being passed through several instruments at from 80 to 140 words a minute. Of course the system requires rather more operators at each wire than hand-worked apparatus, but it keeps the line constantly employed at a high rate of speed, and that is the chief consideration, I presume.

Since Edison's startling announcement of his ability to subvert the electric light, London is all

agog with the new craze; several public buildings and sporting exhibitions have experimented with it, and our gas shareholders shiver for their dividends. Our Central Office (which is officially known by its abbreviated code "T. S.") although offering so suitable a ground for a trial, remains as yet untainted by the prevailing mania. Has 197 started it yet?

You separate the ladies and gentlemen in your large offices, I believe. Here it is different, although there are some 800 or 900 of the softer sex interspersed among us. An Italian nobleman, high in telegraphic office in his sunny clime, visited our big house the other day for the purpose of studying the scientific improvements of which we are so proud, as he had done in most other European capitals. But when he came upon the long rows of instrument desks indiscriminately "manned" with both sexes, science thereafter forsook him, and he could only murmur during his inspection, "Cielo! you Ingles are a strange people; de only nation in de world dat dare mix your boys and girls together wid safety!" Adios. BRILLIANTUS.

LONDON, ENGLAND, NOV. 8, 1878.

An Unprincipled Scoundrel.

At a time when the press throughout the country has been recording the courage and devotion to duty displayed by telegraph operators during the recent terrible scourge that has swept away so many thousands to that "bourne whence no traveler returns," it falls to our lot to record the rascality and cowardice of one who is a disgrace to the profession, and whose name will hereafter be a stench in the nostrils of all those who have any claim to true manhood. C. R. Vestal, a telegraph operator, arrived in Mobile about September 14th, to fill the vacancy caused by the departure of Mr. Louis Klotz to the plague-stricken city of Memphis, where he, with others, has reflected great honor upon the profession. Vestal's advent did not cause any stir, and he went quietly to work, as was expected. Being a good operator, and of plausible address, he soon won his way into the esteem and good will of his employers and fellow operators. After he had been in Mobile some time, and the fever began to diminish, he brought his wife and children from Illinois, before there had been a frost, and contrary to the advice of physicians whom he had consulted in reference to the matter. On her arrival, wholly unaccustomed, he took her to reside at a house where there had already been two cases of fever. In a few days the fell disease laid its hand upon the frame of the fair woman, who was a Georgia lady, and death marked her for its own. During the six days' duration of her illness, this brute only went into the room once. When his wife's last moments were drawing near, in her delirium, with the abiding faith and love that a true woman only possesses, her call was for her husband, but his abject fear and cowardice were so great, that her pleadings to see him were in vain. Those who had been his friends told him of his wife's dying calls, and pleaded with him to go and see her, but still he refused, saying he could do no good. A holy man of God went to him, and begged him to respond to her appeals, and to be with her in her dying moments. But all these appeals to his manhood and the better instincts of his nature, fell upon his heart of stone like seed upon a barren soil. This treatment of a woman by her husband was reported on the streets at the time, and public indignation at such gross and ignoble conduct ran high. Through the intervention of parties who believed an exposure would only redound to the injury of his two motherless babes, nothing was mentioned in these columns in reference to this most disgraceful affair. After his wife had been laid beneath the sod by strangers, he returned to his work, and several days after feigned surprise at the reports which reached his ears, and attempted to deny them; but his denials bore the imprint of a lie upon their face. He obtained leave of absence from the Superintendent of the Western Union to take his innocent children to his wife's relatives. This leave of absence was to have taken effect on last Saturday night at 11 o'clock. Friday night about seven o'clock he left the office without leave or license, sent word to the chief operator that he was sick, and took his departure. A gentleman connected with the office whom he had victimized to the extent of about \$35, caused his arrest at Corinth, Miss., on the charge of obtaining goods under false pretences, and he was held there until the amount was forthcoming. To the gentleman who attended to the burial of his wife, he gave no thanks, and left that debt also unpaid. He also left

unpaid debts at the establishments of several business men. He was a native of Indiana, whither he has perhaps returned. It is a relief to the community that he has left, for such a man is a disgrace to true manhood, and to any community where he may in future reside. We believe he was at one time employed in the city of Chicago. We publish as a fitting close to this article, the following sent us by the Western Union operators in this city, upon whom has been entailed double duty since Vestal's wife was taken sick. While the family of the deceased wife have our heartiest sympathies, there is no charity for such a scoundrel as C. R. Vestal has proven himself to be since his short residence in Mobile, and it would be a favor to the telegraphic fraternity if our brethren of the press would pass him around as extensively as possible.

"In order to vindicate the telegraph operators and the profession generally, the telegraphers employed in the Western Union Telegraph Company's office in this city desire to say that they severely censure the actions of a man named Vestal, who was employed here, for deserting his wife while dying; for his imposition upon people who befriend him in his trouble; for his utter disregard for all manhood in running away and leaving unpaid debts, thereby reflecting discredit upon the profession in this city as well as elsewhere; and we desire you to publish this article in order to show the people of Mobile that the telegraphic fraternity is not wholly composed of men of this character. We, as operators, are generous to each other, but when a man of this character comes among us, we should not be made to suffer for his misconduct; and however hard it is to give your paper this protest against him, we think it just and necessary to sustain our profession.—*Mobile, Ala., Register.*"

The Unkindest Cut of All.

About three years ago the magnates who control the destinies of the Delaware, Lackawanna, and Western Railroad, being convinced that their telegraphic employees were becoming too rapidly wealthy upon the munificent salaries paid them, and knowing the pernicious effects frequently wrought by the sudden accession of riches, determined from purely philanthropic motives to reduce their wages. Accordingly, an order was issued by the president requiring operators who had been receiving a commission on commercial business from the Western Union to thereafter remit the same to the R. R. Co. This movement partially failed in accomplishing the desired effect. Some of the electrical artists still received from thirty-five to forty dollars a month, and were thus enabled to indulge in champagne suppers, and sport fast horses as before; consequently another reduction was made, this time of ten per cent. A year later, soon after the great strike of 1877, throughout which the operators were the only class of employees that faithfully stuck by the Company, an additional five per cent. was taken from their salaries, as a reward for their fidelity. Nor was this the end, for on November 7th came the unwelcome announcement of another reduction.

While sympathizing with the D. L. and W. operators, I am compelled to state that I believe their misfortunes to have been brought about by themselves. The offices of this company have been more than ordinarily prolific in the manufacture of operators, some of whom perform night duty for the princely stipend of twenty-five dollars a month, and there are many others unemployed who would gladly labor for less. At nearly every station along the road may be found from one to three students in various stages of proficiency, and as soon as one is finished another aspirant for electrical honors takes his place.

With this condition of affairs before us, is it surprising that salaries are constantly decreasing? What is the use of prating about "soulless corporations" and "grasping monopolies" when we ourselves so plentifully supply the material for the monopolies to grasp? Surely we cannot blame the companies for obtaining labor at the lowest possible price. No! the fault is with the operators. If they would see an upward tendency in the profession, they must check the wholesale manufacture of operators by refusing to teach students for any consideration, thus allowing some of the talent which at present vainly wrestles with the mysteries of Morse, to expend its energy upon the plough, to the consequent improvement of the agricultural interests.

T. Q. X.

Wanted to Send Cranberries by Telegraph.

She was a big colored woman, and after looking up at the building of the Western Union Telegraph Company, foot of King Street, she entered the business department on the street flat. Mr. Betts was not there, but the other popular clerk, Mr. George Smith, was in charge.

"Dis de 'spatch offis?"

"Yes, madame."

"Dis de plas dey sends de stuff on de wire?"

"It is, madame."

"Can you send by 'spatch stuff to Sussex?"

"Yes, madame."

She put her hand under her shawl, and produced quite a large sized bundle. Throwing it down in front of George, she said:

"Dem's cranberries, dem is; send them by 'spatch to Sussex."

George sent her up to the operators' room on the fourth flat. While she was on her way there he warned the operators through the speaking tube of her approach. She had a "good day" for Mr. Clinch, Messrs. Black, Miller, Dodge, McKee, Driscoll and Mitchell. She wanted to get the berries by telegraph to Sussex. They told her they were too busy to send them just then, and as she was in a hurry she said, "Den I'll go to de Dominion telegraph offis up de street." And off she started. Some time afterward she was heard to say, "Dem telegraph offis is well enuff, but dem's mighty disbliging."—*St. John, N. B. News.*

Dashes Here and There.

It is said that Mr. Edison's representatives in England are so inundated with letters of inquiry that it is almost impossible to open them.

It makes no difference whatever how poor the chirography may be on the half-rate messages, they are always sure to be "red" somehow.

A dividend of five shillings (\$1.25) a share, or at the rate of 5 per cent per annum, has been declared by the Direct U. S. Cable Co. for the quarter ending September 30th.

A man has at last been found who handed in a message without adding: "Please send it right away." It was an invitation from his wife to her mother to come and spend a few weeks with her.

"The coming man is he who discovers how to make a pen that ought to last one day, run for a week. Giant minds have already expended considerable thought on the subject, but the sus-pen-se has not yet been relieved." The party who penned the above is now in a lunatic asylum.

Following the example of the Bell Telephone Co. of this city, the Bell Telephone Co. of London have commenced suit against the Carbon Telephone Co. of same city. It also gives notice that all persons using telephones will be required to pay \$10 a year as rental, the first year to be paid in advance.

A lady sent a message to 21 Exchange Place, and returned quickly afterward to inquire if it had been sent to Boston. "Why no, of course not," was answered. "Well, then it should have been," she replied. "But you did not address it so," was the mild expostulation. "Well, you had a right to know where it was going; you are receiving them all the time, and ought to know"—and she meant it, too.

Elisha Gray had an immense entertainment in his honor at Chicago the other evening. Telephonic music, telephonic speeches, telephonic songs, telephonic poetry, and telephone on toast. Big time. Congratulated as being the first and only inventor of the telephone. So was Bell, when they gave him a banquet; so was Edison, when he had his free lunch; so was Dolbear; so was—by the way, who did invent the telephone?—*Detroit Free Press.*

The London *Mining Journal* points out that, aside from its other advantages, the success of the electric light would solve a most important problem affecting the lives of many persons now working in mines. "There appears to be no reason," says the *Journal*, "why electricity should not be made applicable for mining instead of lamps, and this would effect what our mining engineers and foremost chemists have long been looking for. It would give the men a light such as they have never dreamt of, enabling them to get a much larger quantity of coal in a given time than it is possible for them to bring down by the light of the lamp, which barely suffices to make the blackness of the working places visible. It would also benefit both masters and men, and greater safety would be insured, for explosions would be but almost impossible, while the miners

would be better able to guard against falls of roof and coal."

PATENTS BY CABLE.—Seven patents were granted in England alone for electric light between Oct. 29 and Nov. 4. About one-tenth of all the patents now taken out in Great Britain are for electric lights. Mr. Edison patents all the discoveries made in his experiments, both in the United States and in England. Sometimes he makes quick work of it. Last week he made a discovery at 4 o'clock in the afternoon. He got a wire from Menlo Park to Plainfield, where his solicitor lives, and brought him into the telegraph office at that place. Mr. Edison wired him the discovery. He drew up the specifications on the spot, and about 9 o'clock that night cabled an application for a patent to London. Before people were out of bed next morning Mr. Edison received information that his application had been filed in the English Patent Office. The application was filed at noon, and he received information about 7 in the morning, five hours before the filing. The difference between London and New York time explains the matter.

An Opinion of "The Operator," from a Good Authority.

Mr. James D. Reid pays us a very handsome compliment in his "Telegraph in America," just issued. He says:

"THE OPERATOR," a finely printed quarto, was started March 1st, 1874, by Samuel L. Welp and Tom Allen, of the staff of the Western Union Telegraph Company. It is now published and edited by Mr. W. J. Johnston, who, by tact and industry, has made it a success. Many of its issues have been models of taste in the arrangement of its selected articles, and the scope and spirit of its editorials and correspondence. It is spirited, cheerful, vivacious. It has a large subscription list, and the odor of the operating room pervades its pages. Such a paper is only possible in an intelligent staff of men such as work the wires of the American lines."

PERSONALS.

The New Orleans force is almost entirely a new one since the yellow fever.

Jas. L. Gilmore, an old-timer, is working for the A. V. R. R. Co., at Eminton, Pa.

J. M. Barre, lately operator for the B. & O. R. R. Co., at Fayette City, is working nights at Dallas, Texas.

Mr. G. W. LaRue, of Springfield, Ohio, is off on a chicken shoot in Kansas, and having a very enjoyable time, he says, killing plenty of game.

The Western Union office at Harbor, Ohio, will soon close for the winter, on account of navigation on the lakes being about to close for the season.

Charles H. Hambright, of the Washington Western Union day force, has resigned. Mr. Dyer, late chief operator of the Mobile office, fills the vacancy.

Mr. Frank Everett, operator at despatcher's office, Ashtabula, Ohio, A. T. and P. R. R., proposes to take a trip to Michigan as soon as business slacks up.

A rather unique bull was perpetrated last week by an operator who considers himself second to none at the office he works in. The name was Emma H. Holmes, but he got it Miss Wm. A. H. Holmes.

F. P. Wherry, operator at superintendent's office, Pennsylvania Railroad Co., Pittsburgh, has been tendered a position as stenographer in general manager's office, Philadelphia, for the same company.

Mr. F. D. Squires has been compelled to resign his position with the Western Union at Galveston, Texas, on account of ill health. He is now in the country rustication, and, we hope, will soon be able to be at his post again.

T. P. Hale, day operator at Jamesburg, N. J., who has been ill for two months, has resumed duty. Mr. W. H. Stonaker, who filled the position during Mr. Hale's absence, has returned to the Superintendent's office at Camden.

Mr. F. J. Truesdell, an old-timer, formerly operator and agent at Girard, Ohio, on the A. T. and P. R. R., has resigned at that place and accepted a position as operator at Jefferson, Ohio, on the L. S. and M. S. R. R. Mr. A. L. Reeves fills the vacancy at Girard.

This man's example might be followed by operators on other wires without offense to us: "I inclose you P. O. order for \$22.80 for the above list of subscriptions to THE OPERATOR. Have secured all the operators on the A. and N. except two, and expect to get them soon."—H. W. FORMAN."

Mr. W. F. Fowler, formerly operator at Sewickly, Pa., on the P. F. W. and C. R. R., has resigned at that place and accepted a position as agent and operator opposite Sewickly, on the new P. and L. E. R. R., which will open by next month. Mr. Harry Gray has been appointed to fill the vacancy at Sewickly.

NORTHERN RAILWAY OF CANADA.—Pete Healy is morning dispatcher and Tom Downie in the afternoon. Robt. Green, relieving agent, comes around to let the boys away for a while. Roger McGill is agent at Alkandale Junction, with Ed. Kingsley as operator. Roger and Ed. do a heavy "biz," and they are kind and obliging, and always on hand. Jim Townley is operator at Barrie.

Out of the twenty-five men employed in the Memphis telegraph service, eleven died, nine recovered, and five escaped. The only one to hold his ground from first to last was Putnam, and many a long night while the fever was raging was he the sole individual engaged in coping with the enormous press of telegraphic business of the city, all the rest having succumbed to the plague, one after the other.

Two swindlers named Tyson and Ross announced last week that "Professor Edison, of Menlo Park," would lecture at St. Stephen's Hall, Buffalo, and were on hand to receive the admission fees of the expected audience. Only one gentleman and two ladies, however, put in an appearance, the lecture not having been properly advertised, and the alleged agents of the Menlo Park sage were arrested by the police.

We are indebted to E. M. Emery, the very popular operator of the C. and B. H. Telegraph Co., for a copy of THE OPERATOR, the telegraphers' journal, published in New York. It is a large size sixteen page, semi-monthly publication, embellished with neat engravings, and brim-full of matter not only of value to the brotherhood, but interesting to the public at large. Mr. Emery is agent for the work.—*Deadwood (Dak.) Western Enterprise.*

SOUTH PACIFIC COAST RAILROAD.—At general office, San Francisco, we have Sam Fisher. At ferry office A. D. Edgar is agent and F. Fitzgerald operator. Across the bay, J. W. Shafford is train dispatcher at Alameda Point. At Alameda, James Fish is agent and operator. A. H. Walker is at "shops," Newark. F. K. Saxe is at Santa Clara. James V. Tisdall, an old-timer, who worked on old State Line in San Francisco in '53, but has been out of the business lately, is agent. Chas. A. Cook is operator in city office, same place, and H. H. Smith manager. A. J. McFarland is at Los Gatos. At Alma, the present terminus of the road, J. H. Aram is agent and operator.

Rev. Henry Ward Beecher had occasion recently to telegraph to Syracuse, N. Y., but by mistake directed the message to Utica, N. Y. The receiving clerk notified him that Mr. S— was unknown at Utica, N. Y., and in reply received the following note: "Mr. S— lives in Syracuse, N. Y., and if anybody told you Utica, he did not know what he was about. There are just such folks in the world—always making blunders—and if you could lay your hands on them and abate them as nuisances, it would be well. Please put on a double battery on this delayed message; so as to get it to Mr. S— speedily, lest he be too late for to-night's train, and my money be spent in vain."—HENRY WARD BEECHER. The receiving clerk immediately sent Mr. Beecher the original "copy," with Utica, N. Y., plainly written, whereupon the reverend customer remarked: "I'm glad you nabbed him."

CHICAGO AND ALTON RAILROAD.—Mr. J. E. Hutchinson, agent at Stanford, has accepted the position of day operator at Bridge Junction, East St. Louis. He was relieved at Stanford by Mr. Jas. Morgan. Mr. McCann, who has been night operator at Chenoa for some time past, has been appointed agent at Gardner, vice M. Burley resigned. Mr. C. B. Hanna has taken the night office at Chenoa. Mr. W. D. Murdock, formerly agent at Tallula, Ill., has been appointed agent at Vandalia. Our able train dispatcher, J. A. Jordan, Bloomington, has returned from his bridal trip to Wheeling, Va., and settled down to business, after accepting the position of assistant chief train dispatcher. Reduction of wages seems to be in order on this road—quite a number of employes have been discharged and a

great many reduced in wages. It has not effected many operators, as they are on "hard pan" now.

Don McManus, night operator and ticket clerk for the Cincinnati, LaFayette and Chicago Railroad, at St. Anne, Ill., absconded on the morning of Nov. 22d, taking all the available funds of the office with him. McManus was formerly employed as night billing clerk in the freight office of the L. and N. R. R., at Memphis, and later, as extra operator on the Chicago and Eastern Illinois Railroad. He understands the theory of freight and ticket business, is a first-class operator, and one well calculated to deceive. He is about 25 to 30 years of age, five feet seven inches in height, dark complexion, slim build, smooth face, three upper front teeth well formed but large and protruding slightly beyond the lips. He wore a light gray suit and dark felt hat. Telegraphers should look out for him.

B. R. NORDYKE, Agent C. L. and C. R. R.,
St. Anne, Ill.

NORTH CAROLINA.—E. E. Williams, of this State, who worked at 145 Broadway for the A. and P. Co. last year, was married to a highly accomplished and charming young lady at Burgaw, N. C., last month. Ed is now operator at Tarboro, N. C., for the W. and W. Railroad Co., and we wish him every success in his new relation. Mr. Duncan, of Beaufort, N. C., is operator in M. T.'s office at Wilmington for the C. C. Railway Co. Mr. D. P. Beckham, who formerly held this position, has settled in Texas. E. B. Rock is agent and operator at Grifflinsville, on the C. C. Railway. R. J. McIlhenny, who worked at Bristol, Tenn., last summer, has returned to Wilmington and resumed his position as G. and S. operator in the W. U. Tel. office. June Potts, a veteran war operator, is working temporarily at Monroe, for Mrs. Perry, the manager, who we regret to hear is quite sick. June has not worked at the business for a long time, but has by no means lost his grip. E. F. Riddick, who worked in Wilmington last winter, is now working for the W. U. at Augusta, Ga.

COLUMBUS, O.—A few changes have taken place since our last communication. Jim Golden has left us for Cincinnati, and taken with him our best wishes. Jim is an "old timer," and an excellent operator. Dick Morris, of Cincinnati, has been appointed to fill the vacancy. Bob Mason, of Cincinnati, and Charley Colwell, of this office, have changed places temporarily. It is currently rumored and generally believed that Bob is very popular among the ladies. Miss Nellie Kelly has been added to our day force, and we boldly assert that Nellie is the very best lady operator we ever met, and we've seen and heard from the best. The notorious Hank Cowan, who left us a few months since as a private in the regular army, has, through the influence of friends, procured his discharge, and is working for the United States Military Telegraph at El Paso, Texas. He writes that he has braced up, and that his prospects are flattering. Through his many trials he has kept his wonderful grip, and still drives the same beautiful quill he did in '49. Our chief, Charley Ross (not little Charley), has just returned from Nebraska City, where he has been visiting friends for the past few weeks. Si. Williams has resigned the managership of the A. and P. E. D. Carile fills the vacancy. The fare to New York is now only a dollar, and floaters are correspondingly happy.

MARRIAGES.

EVERTS—FORT.—At Grace Church, Mexico, N. Y., Mr. George B. Everts, operator, San Antonio, Texas, to Florence J., daughter of John A. Fort, New Haven, N. Y.

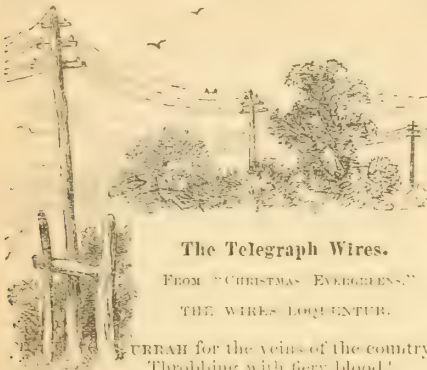
LOMBARD—BARBER.—October 31st, at Washington, D. C., Mr. A. J. Lombard, of the Western Union Telegraph office, to Miss Susie Barber, both of Washington.

HAWK—GORDON.—November 14th, at East Liberty, Pa., Mr. H. N. Hawe to Miss Sadie Gordon, telegraph operator, "Hawkins Tower," Penn. R. R.

WILLIAMS—WELSH.—October 16th, at Baltimore, A. M. Williams, of Philadelphia, operator N. C. R. R., to Miss Laura V. Welsh, of Mt. Washington, Baltimore County.

BIRTHS.

November 4th, to Dr. W. V. Wilson, night operator, Monmouth Junction, N. J., a daughter.



The Telegraph Wires.

FROM "CHRISTMAS-EVENING."

THE WIRES LOQUENTUR.

ERRAND for the veins of the country,
Throbbing with fiery blood!
Hurry for the wires that carry the thoughts
Of the city's multitude!
The gleaming rails are the sinews
That sway the strong right hand,
But the wires carry the heart blood thoughts
Across the busy land.
We're at home in the pathless prairie;
We're at home in the solemn woods,



THE WIRES IN WAR.

We march in the van of the army
That rolls to the far-away fight,
When our banners glow with the presence
Of the God who strikes for the right—



Past the pickets that sternly stand
Each on his lonely post;
And the moonbeam shimmers on the tents
Above the sleeping host.
We see them march to the battle,
And our veins are big with pride,



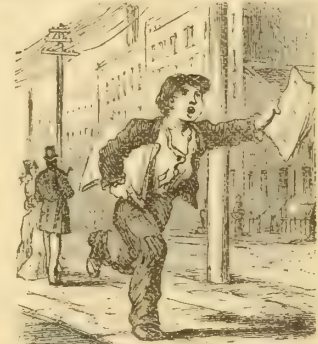
When the blue coats stoop to the shower of lead
That rains from the mountain side,
Till the battle is white with smoke;
And over the wild unrest
Stream in fierce joy the burning stars
Of the land we love the best.

We hurry, hurry homeward,
When the long day's battle is done,
With news of a great one fallen—
With news of a great fight won.
Where women watch with weary eyes,
And little children wait,
Under the musical sycamore
Down by the garden gate,



And down in the office, from white lips
Faint breath comes quick and short
When the sounder clicks the list of killed
In the afternoon's report.

Crowds are choking every street,
And great bells boom in stately towers;
Flags flutter out on smoky roofs—
After the battle joy is ours;
Joy on the land, joy on the lake,
Where a hundred ripples of sunshine laugh;



And joy where the ragged newsboy shouts:
"Great news by telegraph!"

THE WIRES UNIVERSALLY.

We bring glad news to inland homes,
Of ships upon the sea;
We hurry along the murderer's trail—
His Nemesis are we.



We watch all night the roaring trains,
When the sleepless sounder clicks
A caution for Number Seven Past
To wait for Number Six.

We are knitting land to brother land,
And hurrying on the day
When the clouds above the glorious stars
Shall all be rolled away;
When the people shall learn war no more,
Nor again the cymbal clash,
And all the nations speak one speech—
The telegraph dot and dash.



THE WIRES IN PEACE.

We start from the busy city,
That throbs to the rush of feet,
Where the hurrying army of trade
Goes rushing down the street.
We pass the white-walled cottages
Where the pleasant sound of bees
Crones the sultry day to sleep
In the clover under the trees.

CHRISTMAS EVERGREENS,

A COLLECTION OF
TELEGRAPHIC AND GENERAL POETRY FOR THE HOLIDAYS,

INCLUDING GEMS FROM

LONGFELLOW, BRYANT, GOLDSMITH, MONTGOMERY, GRAY, LANIGAN, ELIZA COOK, AND OTHERS,

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The OPERATOR

A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY.

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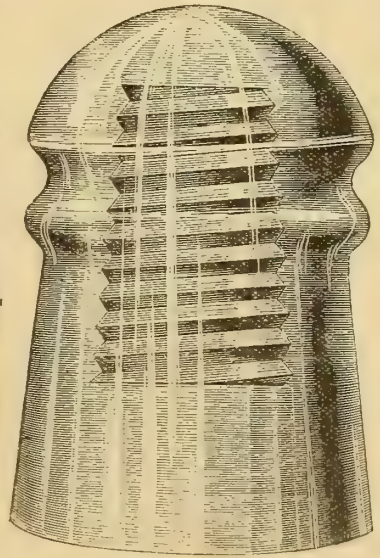
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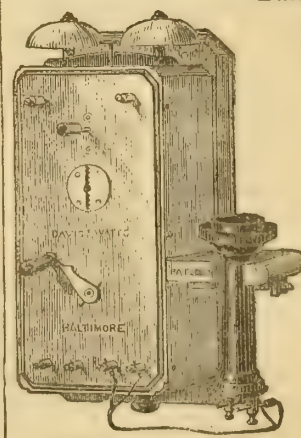
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December 15th, 1878.

Volume IX.

Whole No. 116.

Lightning Joe.

Tell the boys to shake their keys up,
Pile the specials in a row—
All you sluggards give your ease up,
Here's the veteran Lightning Joe.

I'm the modern Morse Xerxes,
Never broke nor lost my grip;
Beat my way from Maine to Texas,
Cost me three cents for the trip.

Take a back seat, General Eckert;
President Green you ought to know
Managers, chiefs, and superintendents
All stand 'round for Lightning Joe.

Never mind how fast the pace is,
Send ten million words or so;
Abbreviate, send naught but spaces—
That's all fun for Lightning Joe.

Get your fastest men to send 'em—
Plugs stand back, for I'm your foe—
Pen in hand, I'm going to rend 'em
All to pieces, Lightning Joe.

High officials stand like sentries,
Make me room where e'er I go,
Put me in your monthly entries
"Ninety dollars for Lightning Joe."

Here's a wire beats all creation,
Let me tackle it—here we go—
Whoop 'em up like old tarnation,
I'm the veteran Lightning Joe.

Mighty fast! But I must try it—
"Was that check Collect or Paid?"
That's one break, I don't deny it—
First for many a year I've made.

Two more breaks that man enrages—
I must edge on that ere blow.
Mister Manager, make my wages
Eighty dollars for Texas Joe.

Fourteen breaks the next ten seconds?
And still the signals faster go!
I'll be pleased if this chap reckons
Seventy dollars for second-class Joe.

"Sixteen words instead of twenty?"
"Wrong address?" He sent it so!
But, Mr. Manager, make your entry
Sixty dollars for third-class Joe.

And you, sender, not so madly,
Nor so fast, I pray you, go;
For I'm out of practice badly,
Getting feeble, old Plug Joe.

"That don't suit?" "The boys all hiss me?"
Mister Manager, is that true?
"Yes?" Well, kind sir, don't dismiss me,
Find old Joe some job to do.

Let me whitewash all your fences,
Clean the battery, sweep the flo',
Only let me make expenses—
Fifty dollars for poor old Joe.

Give's a chance, and I'll be thrifty,
Let the salary question go;
Pay me seventy, sixty, fifty,
Forty dollars for humbug Joe.

Thank you! That's a life position—
Narrow escape—but no more blow—
Cleaning batteries—all contrition,
Thirty dollars for humble Joe.

WERNER.

PHILADELPHIA, Pa., Nov. 25th, 1878.

Within twenty-four hours after Passavanti's attempt on King Humbert's life the king had received 4,600 de-patches of congratulation on his escape, and Signor Cairoli 2,600. It would pay the telegraph company to employ a man to make weekly attempts on the king's life.—*Norristown Herald.*

LAURA.

A STORY IN TWO PARTS.

PART II.

The first part of this ghostly tale was written by me two years ago. I laid the manuscript carefully away from the gaze of curious eyes, and it would probably never have been sent to the printer, and the reader have been spared an affliction, had I not received the explanation of "my mystery," which follows.

One evening, about a year and a half ago, I was pensively walking down Washington Street, Chicago, wondering how I could most pleasantly while away the few remaining hours before bedtime, when I was brought to a sudden halt by a slap on my shoulder and a hearty "Helloa, Jack!" shouted in my ear.

I looked up, and behold, there stood Tom Duncan, my old telegraphic friend of B—. I did not recognize him at first glance, for "Time, whose arbitrary wing" brings changes to us all, had transformed him from the bright, smooth-faced youth that I once knew, into a tall, full-bearded, handsome man, who looked as though he had passed lightly o'er the ills, and made the most of what was pleasant in life. He was as jolly and his smile as cheery as of old.

To say that I was glad to see this chum of my earlier and better days, would hardly express my feelings. After our first greeting was over I plied Tom with questions as, from whence he came, and whither he was bound.

"Well," he replied, taking hold of my arm and walking off with me, "I have been operating in the telegraph office at Montreal, Canada, for the past year, and as that was the longest time I had ever been content to remain in one place, and, as I liked it, I had about made up my mind to settle down on the 'Queen's soil,' get married, and enjoy the sweets and comforts of a home for the balance of my days. But this was not to be. A few days ago I learned that you and two or three more of my antediluvian friends were in Chicago, and I was seized with an irrepressible desire to see you all again; so I immediately resigned my situation, bade adieu to the 'Kanucks,' (right royal fellows the most of them are, too), took the first train West, and here I am before you, hale and hearty, and as happy as a clam at high tide. The same old rocks as of yore, but more settled down and solid now. By the way, Jack," he continued, "I go to work in the office with you to-morrow. I have just been up in the seventeenth story of that old slave-pen interviewing the manager. He put me on the day force the first thing. What jolly evenings we shall have together, eh, old boy!" and I received another hearty slap as emphasis.

We got some cigars and went to my private room. I wanted to sit down comfortably, and, while smoking, tell Tom my ghost story; but I wanted to be as isolated as possible while so doing.

He struck the key-note to my thoughts by asking me what took me away from B— so suddenly. This was a good opening, so I at once told him all, even showing him the letter that I had received from Mr. Douglass. I noticed a merry twinkle in Tom's blue eyes whenever I looked at him, and was not a little provoked at it, but held my temper, and when I had concluded the tale, which I thought would make his blood run cold, asked him what he thought I had seen that night.

"Well," he replied, laughing, "you had the pleasure of looking upon the face of a very pretty young lady, no less a person, in fact, than my cousin, Miss Laura Fleming! Hold on there now!" continued Tom, putting his hand up to my mouth; I was getting indignant, and about to express my feelings in as vigorous language as I could call to my aid—"keep quiet, don't say a word until I get through, and I'll make it all as plain to you as the noonday sun."

"In the office at B— there was a trap-door which let into the cellar beneath. I was aware that you did not know anything about this door, and it occurred to me, one day when I was looking at it and studying up some mischief, that I could give you a good scare by wrapping a sheet around me and coming up through it, appearing before you some night when you were all alone meditating over your sins. To think with me in those days was to act, so I raised the door, oiled the hinges, and placed a strip of cloth around the edges, that it might not make the least noise when raised or lowered. I next got a step-ladder, took it into the cellar, and placed it in position under the trap. So far so good. Everything was in readiness now to

carry out the scare, and I determined upon the next Sunday night as the time.

"My cousin, Laura Fleming, from this city, was visiting at our house at the time. She was a lively girl, and as full of mischief as the old nick. I told her of the scheme I had on foot to frighten you. She entered into the spirit of the thing with a vim, laying plans for carrying it out, and taking upon herself the most difficult part, that of playing the ghost. I argued against such a proceeding, but to no purpose. Who can argue with a pretty girl? Not I, at least. She must have it all her own way. Well, the next Sunday night, or rather Monday morning, at one o'clock, we started for the depot to put her plan into execution. I tapped the wire near the office, grounded it south, and put my small pocket instrument in circuit north, so that when you called St. Louis to send the message Laura was to give you, that office could not hear you, but I could, and would answer his call, and give you O. K. to the message, which, of course, would satisfy you.

"We could see you through the window, and, watching her opportunity, Laura went down into the cellar, climbed up the ladder, passed quietly up through the trap-door, and appeared before you, as you remember. While sending her message (to me), which took you longer than you supposed, she slipped down into the cellar as noiselessly as she had gone up, and in a moment stood by my side. I quickly detached my instrument, connected the wire through to St. Louis, and off we started for home as fast as we could travel, never once thinking to stop and see how you had fared.

"The next morning Laura looked like a real ghost; she was pale and excited over her night's adventure. She regretted exceedingly what she had done, and made me promise and almost swear that I would not say anything to you or any one else about it. She said it was such an awful thing to do, and could not be prevailed upon to remain in B— a day longer, for fear of meeting you and being recognized.

"My conscience troubled me not a little when I met you at the office the next morning. You were as pale as Laura was, and looked terribly haggard and bad. I almost made up my mind to break the promise I had made Laura, and tell you all, but the love of a joke was too strong within me. I was tempted to carry this one still further. After you had gone to bed I found your letter addressed to that mythical party in New Orleans. On the impulse of the moment I took the letter, opened it, and read it. Now, I could no more resist the temptation of answering that letter than I could refuse to take a cigar were you to offer me one now. Thank you, I have a match. I always had the knack of disguising my hand-writing, so that even you, who were so well acquainted with my hieroglyphics, would not be able to recognize it. So the letter, which you have already shown me, and which you supposed came from Mr. Douglass, of New Orleans, was manufactured by your humble and repentant Tom.

"I hope you'll forgive us both, for, Jack, I felt very bad when I heard you had left B— without even saying good-bye to any one, and knew that we were the cause of your going, for I thought that it surely must have been the ghost, that scared you out so suddenly.

"Laura is living here in Chicago yet. I have not seen or heard from her for a long time. I do not think she is married, however, and if not, you had better look out when you see her, or you will be pierced by Cupid's dart. We will call on her in a few days. She is hardly as beautiful as your 'ghost.' She was very young when you saw her that night, and, coming before you as she did, you thought her a marvel of loveliness. But she is very pretty, nevertheless, and you will like her.

"Now, Jack," he continued, "it is said that an honest confession is good for the soul, and I believe it is, for I feel better already, and most humbly await the sentence of the court."

"Of course I forgive you both," I said, "but I am half sorry that you have made this confession. I am more sorry than I can ever tell to have to part with the mystery, which I had come to find pleasure in brooding over, and trying to analyze. I experienced a little self-pride, too, in the thought that I had seen and talked with a real, genuine, healthy-looking ghost, and I feel as though something I loved had vanished from my life forever. Ah, me! what can I get now to take the place of my poor ghost?"

"A real live one," suggested Tom, "with black eyes and all the charms imaginable, and I advise you to seek one as soon as possible; for, like myself, you will soon be in the sere and yellow leaf, and

what beauty would have you then? I think we had better both be on the alert, or we may be left, my boy."

"Yes," I replied, languidly, "but I think we had better seek the 'goddess of sleep' first. If we remain up much longer we shall be so sleepy and stupid to-morrow that we won't be able to tell a dot from a dash, nor wield a very steady pen; and as it will be your first day in the office, this would not look well. The chief operators examine the work of a new recruit in the force with critical eyes, and I want you to show them what a splendid master of the 'mystic art' you are."

"All right," replied Tom, "Let's make it '30,' and cut out."

Shortly after Tom's arrival in Chicago he took me to see his cousin Laura. She was an orphan, and resided with her aunt in a cozy little cottage in the suburbs. Her features were so indelibly engraven on my memory that I believe I would have recognized her anywhere. To me she was still beautiful, and I don't know why it was, but I was delighted to find her still a "miss." As Tom afterward said, I was "hard hit."

I passed a most delightful evening in her society. She told me that she had always been so sorry for the part she had taken in that little game of "scare," and putting on a most solemn look, and shaking her pretty little head, said it was such a very wicked thing to do, and asked me so sweetly to forgive her, that of course I did. This visit was followed by many more, and one year ago we were married. Tom was at the wedding. He said we looked so happy that he was going to see if he couldn't find a "ghost" himself. His search was successful, for in three or four months he rented a house adjoining ours, furnished it neatly, and placed a happy bride within to look after it. It would be hard to find two happier homes than Tom's and mine.

This evening I am sitting at home writing with Laura beside me, knitting away as fast as her busy little hands can go. She stopped for a moment just now, and looking slyly up into my face, remarked:

"Jack, dear, do you still believe in spirits?"

"Yes," I replied, patting her tenderly on the head, "I believe in one kind of spirits, and that is the spirit of mischief; for through it did I not get my darling little wife, who has made me far happier than I ever dared hope to be."

"Thus may we ever, side by side,
From happy years to happier glide;
And still, my Laura, may the sigh
We give to hours that vanish o'er us,
Be followed by the smiling eye
That Hope shall shed on scenes before us."

JACK HARDY.

Pacific Coast Items.

I think the following anecdote has never been in print:

A pair of good, innocent, unthinking old Grangers from Clackamas County happened along one day at an Oregon stage station that was also a telegraph office. One of them, the woman, of course, in the spirit of curiosity that her sex so honestly come by, began investigating the mysteries of the telegraphic art. The operator had not become sufficiently expert to read by sound, and when the lady from the back country entered, he was intently engaged in deciphering the characters upon the strip of paper passing through the register. Of course she did not wait for him to be at leisure, such consideration would be entirely unexpected, and perhaps not be duly appreciated. She proceeded at once to the business of obtaining knowledge, and in a very short time had apparently mastered the whole theory of the wonderful art, to her own great satisfaction. She inquired if that was the way messages were sent under the ocean, and the operator, truthful as a lineal descendant of the immortal George himself, unhesitatingly answered "Yes."

The knowledge of this startling fact was too much for her to keep to herself, and going to the door she shouted to her consort outside:

"Come in here, John, and see this telegraph machine. There's a great long piece of paper with letters on it, and it goes clear under the ocean without getting wet."

This happened up in Oregon, where, you know, it rains so much that the natives are said to become web-footed if they stay there long enough. Very few of them, however, stay long enough for that. It was up there that a traveler during the rainy season saw a woman wading around in mud and water half way up to her waist, apparently feeling for bed-rock with a long pole that she held in her hand,

while the rain descended in that peculiarly damp and never-let-up manner that is so noticeable in that locality.

"What are you looking for, my good woman?" queried the traveler.

"I ain't lookin' for nothin'," answered the woman, as she jabbed the pole about vigorously, "I'm a-feelin' for that confounded well; you don't suppose we drink rain-water, do you?"

What dim, curious ideas people often have about things. They don't understand or take the trouble to comprehend. The woman's idea that the strip of paper actually went under the water with its message to another land, is very ridiculous, you say; so is the idea that packages can be transmitted by telegraph; and yet some one is occasionally found who actually entertains such a belief. Even educated people are now and then found who know about as much in regard to the art as they know about the political government of the moon. It is sufficient to them to know that they write a message here and that their correspondent receives it yonder. The *how* troubles them not, though the *when* is, they know, a matter of great importance. A popular fallacy is that a message, instead of passing over the wire in silence, as all well-regulated messages do, makes its presence known to the passer-by by a peculiar musical sound upon the wire, and it is not long since a highly respectable daily paper in the East published a long and beautifully-written article in its editorial columns about the "Singing Wires." Treating the matter in a purely sentimental manner, the writer spoke of mournful and joyful notes such as one might imagine in fit keeping with the news that the wires were bearing; and, in short, made a delightfully sentimental article, very enjoyable for its literary excellence to the unsuspicious reader, but sounding very ridiculous to a person who knows that the wiring sing all the same whether a message is passing or not, providing that the invisible fingers of the wind play upon them, as on the harp. Volcan. Some people will always entertain such ideas. They are rather poetical, and don't hurt any one. The schoolboy, as he travels along the lonely country road some fresh, breezy morning, and hears the music on the wire above him, will be none the worse for thinking that an invisible messenger, perhaps of life or death, is making its presence known to him as it speeds along; and when he goes home at night and tells his wise father, as boys have done ere this, that he heard a telegram going by him in the morning air, perhaps the father will be wiser in letting him cherish the delusive fancy, rather than by replacing it with a hard and less poetic fact.

Traveling in the country, have you ever noticed the innumerable marks around the base of the telegraph pole, such as no line man ever made with his iron spur when he astonished the open-mouthed natives by running up to the top with such apparent ease? And have you ever wondered as to the cause? We will suppose it is a bright, clear morning, a fresh, invigorating air is just moving the leaves upon the trees, nature is silent except when the sweet voice of the lark breaks the stillness. "Next comes the schoolboy, with shining, morning face, creeping like a snail unwillingly to school." For him nature is too silent to be companionable, the voice of the lark is only heard at intervals; he whistles, but few musicians enjoy their own music, and then he has a dim idea that the noise he makes is not very musical; if he could only hear a brass band or the simple roll of a drum beaten in the distance, his happiness would be complete. But alas, there is no circus expected for a month yet, and there won't be a political meeting before next fall. He must rely upon his own resources. Above his head stretches the iron wire connecting distant towns; here in the fence-corner stands the pole that supports it, at his feet is a heavy stone. Here are all the elements required by this amateur musician, this lover of harmonious sounds. He lifts the stone and smites the pole lustily, and immediately along the wire and to his listening ear floats a great wave of harmony—clear, tuneful, and melodiously distinct, beginning at the highest note and gradually descending into nothingness, dissolving away upon the sea of air, while the young magician who makes inanimate things discourse such eloquent music, drinks in with ecstasy every note until the last faint sound dies away. Then comes another concussion, and another scar is inflicted upon the yielding wood, and there is one more voice of melody heard in the world around, and this is repeated until the youthful longing for the poetry of harmonious sound is for the time satisfied, and, with quickened step, the boy moves on toward the temple of knowledge where an unappreciative teacher records a "tardy" mark against his name.

Here is an adaptation from Longfellow that ornaments the first page of the Record book of the Virginia City Stock wire here; it is in the handwriting of the gentlemanly operator who works that wire mornings, and his name ought to be given to Fame, but for fear that his modesty might prevent him from looking at it in that way, it is withheld for the present:

"Lives of first-class men remind us
We can leave some biz behind,
And departing, leave behind us
Biz for other men to grind."

"Business which some brother artist
Sends o'er a shaky string,
Down upon his head devoted
'Respectfully referred' will bring."

These lines bear the impress of genius. The reference to a "shaky string" is peculiarly happy. Any operator who has worked for awhile on the California wires will appreciate the force of the application. It is a little worse during the rainy season, but they work badly enough in the summer when the fog descends, turning the air into a sea of dampness. It is like working an uninsulated cable, only that there is more variety in the fluctuations of the current. When the rain descends or the fog comes creeping in from coastward, the average operator begins to murmur, "Now is the winter of our discontent." The operator who is below the average expresses himself with more force but less elegance. In such times as these it is very trying upon the nerves to sit down and receive cipher business with the consciousness that the dropping of a single letter may cause the loss of perhaps thousands of dollars, or, what is worse, be the means of reducing our salary about a hundred per cent., with an indefinite leave of absence. As some one has expressed it before, "It's dreful wearin' on the mind." It will be seen that the poet acknowledges the possibility of an operator occasionally taking a sort of grim satisfaction in leaving a pile of messages on hand for his successor who relieves him when his day's work is ended. It is really a touching sight to see an operator on a busy wire as he first glances up at the clock, then at the pile of messages yet to be transmitted, and makes a mental calculation as to the number he shall leave for his "relief" to start in on. And then when the victim enters and walks confidently up to his place, the retiring artist arises, and as he points to the business says: "You'll have to send steady to-night, it's working rather rocky."

But your correspondent must not indulge his pen too much in sketches of fancy when more interesting facts are, at present, engaging the attention of operators upon the Pacific coast. The suit recently brought by Mr. Williams, an ex-operator in the Sacramento office, against the manager of that office, Mr. Allen, is one that is not merely of interest to those directly connected with the telegraph business, but to the public at large, as the question involved directly concerns the patrons, even more than the employees of the Western Union Co. If the message proffered by an ex-employee can be refused or suppressed, without the company being made to suffer for what the law of California calls its "misdemeanor," then the general public has no assurance in future that important messages hereafter filed and paid for will be transmitted. At the first trial of the case, the chief operator at Sacramento testified that he had transmitted the message himself, and as he is a gentleman whose truthfulness is undoubted, there seems to be something yet to be found out in reference to this business, something which will explain why Superintendent Gamble did not receive it. At the second hearing of the case, a few days ago, there was but little additional testimony brought forward, but the Judge considered the evidence sufficient to justify him in pronouncing the defendant guilty. An appeal was taken and the case will come up before the County Court in a few weeks. There are some circumstances connected with the discharge of Mr. Williams that are also interesting in this connection. In the telegram sent to Mr. Gamble, a copy of which was published in THE OPERATOR of November 15th, Mr. Williams states that the manager demanded an apology from "Walther," threatening that if it was not forthcoming he would have Williams "blacklisted." Mr. Walther, referred to above, is a friend of Mr. Williams. He is not a friend of Mr. Allen's; on the contrary, quite the reverse, and to that fact, and because he would not give up his association with Walther at the demand of his "superior," Mr. Williams is supposed to owe his dismissal—at least no other cause is known to his fellow operators, although there is always a possibility that there may

be another side to the question. It is only charitable to suppose that the Western Union Company would not "blacklist" an operator for mere personal reasons, especially on the recommendation of an official whom they know to be universally unpopular, but it must be acknowledged by all that, at present, it has that appearance.

There are some operators, of course, who will only look upon one side of the question, impulsively champion Mr. Williams and thoughtlessly anathematize the corporation they work for. They look upon the Western Union Company as a tyrannical monopoly, and yet must confess, of their own knowledge, that some of its officials are gentlemen who would not be guilty of intentional injustice—men who have been promoted from the ranks and still have some sympathy and fellow feeling for the operators, who may be as deserving as themselves, although less fortunate. Prosperity may have a more or less chilling effect upon all who achieve or inherit it, and occasionally the brain feeds upon the heart until the latter is rendered conspicuous by its absence, but it is unjust to judge all, even by a majority. It is only shallow, selfish, and tyrannical natures that show their weakness by exhibiting their puny power when "drest in a little brief authority."

District officials are often guilty of injustice to operators under them, because of their carelessness in investigating charges brought against certain employees by an officious circuit manager or other petty dignitary, who is too often influenced by mere personal feeling. Faithful employees who worked unceasingly for the company's interest, have been officially decapitated without a day's warning or a chance given for defense, simply because another employee, in no official character, but presuming upon the years of his service for the company, has suggested the execution of the innocent victim. But, turning the question over, what appears on the other side? Why, the simple fact that if officials make serious mistakes and are often unjust, operators also, looking through the distorted glasses of prejudice, too often render a one-sided verdict, which is only less injurious than that of the aforesaid official, simply because it is not backed by power. As an instance, may be mentioned a recent case in which the manager of an important California office has been mentally condemned by some operators who should know better, simply because a discontented subordinate has seen fit to magnify one or two insignificant circumstances, and present them in print in such a manner that the careless or prejudiced reader may see in them evidence of a tyrannical spirit, which is entirely at variance with the truth. In this case, as in many others, any operator with a desire to form a just opinion might have easily discovered that the manager referred to had more reason to complain of the action of his subordinate than vice versa. It is a curious fact in this connection, that the most discontented of all grumblers, and frequently the most dyspeptic and disagreeable operator to work on a wire with, is the one who, at some former time, has held a position superior to the one he now occupies. Visions of his former greatness blind his eyes to the fact that, at present, he is only a private in the ranks. Sometimes by words, and constantly by his actions, he endeavors to impress upon you a sense of the overpowering fact that in the dim past he was the Grand Mogul of a defunct railroad, or presided over the destinies of an extinct "opposition," which now, being dead, possesses all the sublime qualities that a charitable world so frequently accords to an inanimate corpse, although during its life it was not popularly supposed to possess an overplus of virtue.

People who go about hunting man's nests, and having found one, wish to dispose of the eggs to a confiding public, should first assure themselves that the quality is good; should, in fact, be able to guarantee that each separate egg will produce a horse of most excellent pedigree, or, failing in this, they will henceforth have no market for their eggs, which same little moral to an untold fable is "respectfully referred" to—whom it may concern.

Death has again entered our ranks; consumption has claimed another victim, and Bernard Kenney's name is added to the long list of those who have been "transferred" to that "Bonnie whence no traveler returns." The place made vacant by his death will not be easily filled. There are very few among us now in whom are combined the qualities which were found in him—an expert operator, a talented man, and a true gentleman. He was scarcely more than a boy when he died a few days ago, and yet he was filling a position of honor as a delegate to the Constitutional Convention, and many who have never met him or knew him as an operator

will feel that the State has lost a good citizen, and the Workingmen's party an honest representative. His funeral was largely attended by his fellow operators and members of the convention. From the former came a beautiful tribute of flowers. He was followed to his last resting place by many a sincere mourner.

Mr. Bowker, whose reputation as a very "immediate" transmitter had already preceded him, has arrived here from Buffalo, and is now engaged in a practical test of the receiving capacity of the Western operator. It is hoped that his verdict will not be an unfavorable one. If that telegraph tournament ever comes off, we want to see Bowker, Frank Medina and one or two others in San Francisco in a race for glory with Brown of Virginia City, Woods of Sacramento, Burke, Morrison and Cook of Salt Lake. Why can't it be tried some pleasant Sunday? We have not heard of any fast time lately. Are our fast men getting rusty? But no; we have the best of reasons for answering, "Decidedly not."

Mr. Sherer has been transferred to Los Angeles. Messrs. Kingsbury and Todd are comparatively new additions to our force.

San Francisco, November 30th.

DOM PEDRO.

"The Telegraph in America."

Mr. Reid's book deserves a much more extended notice than we were able to give it last issue, though we have been rather busy since then to even examine it as thoroughly as we would have liked. We have read enough, however, to see that the book is one that will prove deeply interesting to telegraphers, and should be in the hands of every man who takes any interest in his profession. Five dollars is, we are aware, a considerable sum for a telegrapher to pay for a book, but by Mr. Reid's plan of only paying a dollar a month, many will no doubt be able to secure copies. From a lengthy review of the book in the *New York Times* we take the following:

It is one of the curious facts of the history of the telegraph that New York capitalists gave it the cold shoulder at the outset, and that its leading men have constantly come from the West and South. Maryland was the first State that ever incorporated a telegraph company—the old Magnetic Telegraph Company, capital \$60,000, of which Morse was one of the incorporators. The construction of the line was under the personal direction of Ezra Cornell; the wires, of unannealed copper, were strung on poles; glass bureau knobs were used as insulators. The route followed was from Philadelphia, by way of the Columbia Railway, to Morgan's Corners; thence to Norristown, Doylestown, and Somerville, to Fort Lee, a curiously roundabout route to adopt between two commercial centers. The New Jersey railroad companies refused the new venture right of way, except on most oppressive terms, and the old wagon-road from Somerville to Fort Lee was followed for the entire distance. The line was opened from Philadelphia to Norristown in November, 1845. The battery employed was Grove's, and the nitric acid and zinc and mercury amalgam were renewed every morning. Mr. Alfred Vail was in charge of the Philadelphia office, the author of the work under review acted as his aid, and Samuel K. Zook and William J. Delano were the assistants. None of them had any money or any salaries. It induces a quiet laugh in these days of perfected electrical science to be told that the first relay magnet used at Philadelphia weighed over 100 pounds, both Morse and Vail entertaining the idea that the resistance of the wire of the magnet should not differ materially from the resistance of the line of wire. Vail issued a pamphlet description of the telegraph by way of assisting in the quartermaster's department, for the four poor pioneers had as little credit as they had money, and Philadelphia purveyors are proverbially cautious. The wire broke a few days after the section was opened, and Zook was sent to repair it, with directions to find the rupture and open communication by standing in a puddle of water and using his tongue as a battery. The strength of the current upset him, to the laughter of a large crowd, and he did the first swearing ever done by telegraph. The whole line was finished in January, 1846. Reid managed the Philadelphia, and Charles T. Smith, familiarly known as "Top," the office at Fort Lee. A receiving office for messages was opened on this side of the river in the house of Audubon, the naturalist, and two Whitehall

boatmen were engaged to keep up the communication. The troubles of the new company now began. The bureau knobs were splendid targets for boys, and went by the dozen. But the first great calamity was one of those cold rain-storms which leave a coating of ice on everything exposed to their inclemency. The structure was a beautiful sight the next morning, like silver harp-strings glistening in the sun; but the wind rose as the sun rose, and at 8 o'clock down went forty miles with a single puff. The boys stole most of it, and iron cords of three strands were substituted for it. Mr. Reid had previously repaired short sections of the line with iron wire, and it had been found, to their amazement—for nobody had heard of Steinbeil at that date—that it was just as good a conductor as copper. The Philadelphia and Baltimore line was built in 1846 for \$14,000, the wires being tarred for the entire distance, partly by Mr. Reid personally, and for part of the distance by a newly-landed emigrant, who died before his work was finished. Amos Kendall was the first President of this company, Thomas M. Clark the first Secretary, and A. Sidney Doane Treasurer. The stockholders printed a card declaring that they were not responsible for debts. There were only 10 operators at the date on the whole route from New York to Washington. The cash receipts for the year 1846 were \$4,228.77. The Washington and New Orleans Company, the Western Telegraph Company, and the Atlantic and Ohio Telegraph Company, were all formed in 1848. The route of the Western was from Baltimore to Wheeling by way of Harper's Ferry and Brownsville; that of the Atlantic and Ohio from Philadelphia to Pittsburgh. A sharp war between these two companies for New York business—the Magnetic Telegraph Company owning the wires between New York and both objective points, Philadelphia and Baltimore—speedily ensued, in which both lost money, although the Western appears to have got rather the worst of it. The Pittsburgh, Cincinnati and Louisville; Southwestern; Ohio and Mississippi; Illinois and Mississippi; Ohio, Indiana and Illinois; Lake Erie; New York and Erie; New York, Albany and Buffalo, and how many others need scarcely be enumerated, were, it is a noticeable fact, all of Middle, Southern and Western origin. Telegraphy was not yet popular in New England. As late as 1844, when the New York and Boston Magnetic Telegraph Company was soliciting capital, Boston moneyed men refused to invest, and Hon. F. O. J. Smith, a member of Congress, by the way, as well as an electrical enthusiast, had to commence the construction with money from his own pocket. Smith was mad just at the moment on the subject of resinous insulators, and the end was that the company went behind \$2,000 the first year. The New York and New England Company, a rival concern, using the Bain patent, came later. The application for a patent here had been rejected, on the ground of infringement upon the Morse patent; but this did not prevent the enemies of Morse, who were many and bitter, from organizing a company. The two subsequently became the New England and Union Telegraph Company, after losing money until they were both crippled.

It is useless to enlarge upon these early and ruinous rivalries. The Western Union Telegraph Company, a title, by the way, that originated with Ezra Cornell, was the first to seize and carry out the idea of a universal consolidation. Mr. Cornell was the personal agent in most of these early negotiations, and had already conceived the idea of merging all patents, the Morse, the House, the Bain, and others, and all lines into one grand and uniform system. The Western and Middle States were full of competing lines. The active spirits in the consolidation that now rapidly ensued were Mr. Jephtha H. Wade and Gen. Anson Stager. It was the latter who first conceived the idea of forming an alliance with the railway routes, and the alliance with the newspaper press, which forever linked these three great interests by a common band, was speedily perfected. Though silently done, the execution of this idea of a triple alliance formed a more important era in the history of the telegraph than did the successful completion of the first Atlantic cable, August 6, 1857.

Germany is rapidly completing an excellent system of subterranean telegraph lines. From Berlin these lines radiate to Cologne, Frankfurt and Strasburg. The longest line is from Kiel to Strasburg. When underground telegraphic communication is completed between Hamburg and Cuxhaven, Harburg, Bremen, Oldenburg, Emden, Coblenz, Trier and Metz will be added to the system as fast as the weather during the winter will permit.

THE OPERATOR A JOURNAL OF SCIENTIFIC & PRACTICAL TELEGRAPHY

W. J. JOHNSTON, - - - Publisher.

December 15th, 1878.

No matter what you want from New York, whether it be in the line of telegraphic goods or not, send the order to us. We will see that you get exactly what you want, and at the very lowest price, never charging you more than if ordered direct, and very often considerably less.

WESTERN UNION stock is now quoted at 93½, and A. & P. at 29½.

Edison's electric light costs, according to Mr. Edison, \$1.95 a year for each burner of twenty-candle power. Each gas-burner, same power, would cost about \$15.

As WILL be seen from our California letter, the Williams-Allen case has been decided against the defendant, Manager Allen, who has carried the matter to a higher court on appeal.

SEVERAL who secured "Christmas Evergreens" and "Lightning Flashes" at Agents' rates have not yet sent in any further orders. We shall look for some from them before Christmas.

TO ALL the readers of THE OPERATOR, individually and collectively, we wish a very Merry Christmas and Happy New Year, with many pleasant returns. Let us hope, also, that any gradation of salaries we may have in 1879 may be upward.

THE Telegraphers' New Year's Cards have made what theatrical people call "a hit." In fact, for several days the number of orders has been so great that we were unable to keep up with them. Now, however, we have caught up, and in future will be able to forward the cards almost immediately on receipt of order. There is plenty of time to order yet.

At a meeting of the International Ocean Telegraph Company, in this city December 4th, with Dr. Green, President, in the chair, the annual report was presented, showing an increase in the earnings of the company this year over last. The only change made in the directory was the election of Moses Taylor in place of a retiring member. During the past year it was stated that both the cables between Key West and Havana were repaired, and that they are now in successful operation between New York and Cuba.

ALTHOUGH so short a time issued, an unusually large edition of "Christmas Evergreens" has already been almost all sold, and it is not at all unlikely that we may have to get out another edition before Christmas to supply the demand. Those desiring copies would do well to order at once, lest the supply may become exhausted. The book has met with a very gratifying reception, both from telegraphers and outsiders, as will be evident on reading the opinions of newspapers and individuals in another column. There is no question that "Christmas Evergreens" or "Lightning Flashes" is the most appropriate holiday present that a telegrapher could make.

Superintendents and Their Subordinates.

There is an unfortunate and growing feeling of antagonism between telegraph employes and their official superiors that we think it would be vastly to the interests of both to have dispelled as speedily as possible. The discontent among operators seems to be widespread, and certainly is more marked and outspoken at the present time than it has ever been before. There must be some way of accounting for this. Either telegraphers have become more unreasonable than they formerly were, or else they have more cause for complaint. It might not be unprofitable to look at this subject a little from as much of a disinterested point of view as we can, to find out if possible where the blame rests.

In the first place do superintendents in their treatment of subordinates always follow the divine injunction of doing unto others as they would have those others, were the positions reversed, do unto them? We fear not. If they did we should hear less of arbitrary, spiteful dismissals for purely personal reasons, less of favorites being promoted over the heads of older and more deserving men, and less of this very discontent among employes that is so much to be deplored. Superintendents will say that they are tied down by rules and instructions from those in authority over them, and are not always permitted to do what they might like to. This is very true, but even then, there are hundreds of little ways in which they might make the position of their operators much more pleasant if they would only take the trouble. But the fact seems to be, at least in a large number of cases, that they really *don't care*.

What does the average superintendent care though the fifty dollars a month—though the forty—though the thirty-five—he forces a man to work for is inadequate to support him and his family? If he be compelled to perform extra service at unseasonable hours, and at the expense of his health to provide the bare necessities of life, what affair is that of the superintendent? He has done his whole duty as he sees it. His instructions are to "reduce expenses." He has done so. The salary paid the former operator was seventy-five dollars, but although this man does the same work, is a first-class operator, faithful, steady, and reliable, fifty is quite enough for him. Expenses must and shall be reduced. The company looks for it, expects it—nay demands it, and the superintendent is in the employ of the company, not of the operator. Whoever is made to suffer, the interests of the company must be looked after, and no opportunity for reduction allowed to pass unimproved.

The superintendent is right in looking out for the interests of his employer, but we do not think he should in so doing permit himself to do injustice to an employé. Yet how often is positive injustice done, intentionally or otherwise. An assistant superintendent out in Michigan, who, since his promotion to that position, has succeeded by numerous arbitrary and extreme measures in gaining an unenviable reputation, recently notified one of his operators that his salary would be reduced dating from October 1st, six weeks previously. The operator, however, refused to accept less than his old salary for the back time, and finally appealed the case to the superintendent, who fully sustained him in the ground he had taken. Now, the question arises who authorized the assistant superintendent to reduce

the operator's salary, and make the reduction date back six weeks before the notification? Certainly if the superintendent had, one would think he would have sustained his assistant, as too many are in the habit of doing whether right or wrong. This is only one example. More could be cited, but unfortunately it is not necessary.

On the other hand operators sometimes expect the superintendent to do more than either his instructions or a due regard for the interests of the company will permit. They should not be unreasonable, nor expect too much, and would not, we are sure, if their official superiors would only manifest a disposition to treat them according to their deserts, or at least as much so as all the circumstances in the case would allow. Good conduct, and careful, painstaking, conscientious work on the part of an operator rarely receive the recognition they deserve. If superintendents would only show that they could and did appreciate these qualities, men would have something to stimulate them to greater exertion, and the result would be that operators would lose no opportunity of improving themselves, and of studying the interests of the company; but so long as the present system continues operators will not only not take the trouble of improving themselves, but will leave the business at the first opportunity; the company's interests will suffer, and the discontent among employes increase. We hope superintendents will soon be brought to see this subject in its proper light. It is one that deserves attention, and the sooner the better for the interests of both employer and employé.

The Decree Against the Western Union.

The decree in the suit brought by Clinton G. Colgate against the Western Union Telegraph Company, a full report of which was published in last issue of THE OPERATOR, has been signed by Judge Blatchford. When the case came up for argument, F. H. Betts and ex-Judge Shipman appeared for the plaintiff; ex-Judge Porter and Mr. Gifford for the defendant. Before any action was taken by the court, Mr. Betts called attention to certain letters which the plaintiff had received from William Orton, late president of the company, written about eleven years ago. In these letters the writer said that he would refuse to acknowledge the validity of the plaintiff's patent until it was judicially settled, and that the company preferred to take the risk of using it.

Before signing the decree, Judge Blatchford said that the counsel were perfectly familiar with the fact that it was customary for the court to grant a perpetual injunction as a part of an interlocutory decree. That this matter, however, lay within the discretion of the court was an established fact. The question before him was, whether taking into consideration all the facts in the case, he ought to refrain from following the ordinary custom. The burden was on the defendant to put the court in possession of any facts which would lead it to depart from this course. The question of the amount of a license fee was to be considered. That the interruption of the defendant's lines would produce trouble and dissatisfaction was a thing which the defendant could show by affidavit. But whether the court should rely on the ex-parte affidavits of both sides, or should listen to the cross-examination of witnesses, was a matter of doubt. It was a case requiring a very nice handling of the powers of

the court. If the plaintiff should offer reasonable terms of license, that would be a strong point, but the court could not determine whether the terms were reasonable until the defendant had had an opportunity to put in affidavits on the subject. It was a case which was complicated with other interests than those of the parties, and because of its importance, Judge Blatchford said he had desired the presence of the counsel in order that the best and most just course should be selected.

After considerable discussion a determination was reached that appeared to be satisfactory to all the counsel. The court signed the decree establishing the patent, and requiring the defendant to account before Joseph Gutman, Master in Chancery, for all the savings, damages, etc., caused by the infringement of the patent. The question of granting the perpetual injunction was reserved, and the argument on this is to be heard on Monday, December 23. In the meantime, counsel are to serve their affidavits upon each other.

As the Western Union will appeal the case to the United States Supreme Court, it is not likely, with the law's delays, that the matter will be finally settled for at least four or five years, unless a compromise of some kind can be effected in the meantime. A decision in favor of the plaintiff in this case is a very important matter, for in addition to the Western Union, there are many other companies and others using gutta-percha covered wires that will then be required to pay handsome sums for the use of the patents.

A New President for the Continental.

The Board of Directors of the Continental Telegraph Company have deposed Mr. Nelson from the Presidency, and elected in his stead a Mr. Amos E. Middleton, of Philadelphia. They give as their reason for this step that when Mr. Nelson joined the company he said he could dispose of a large amount of stock, but failed to do so, and that, in addition, Mr. Nelson is hardly the man for the position, many capitalists refusing to invest in the stock so long as he remained President, who were willing to become stockholders should Mr. Middleton be elected to that position. That is one side of the story. The other is that the contractors, who built the line and accepted pay in stock, want to run the company to suit themselves, and therefore elect Mr. Middleton, a retired wealthy iron merchant, whose lack of telegraphic experience is counterbalanced by the fact that he is a relative of Mr. Middleton, the contractor of the Philadelphia line.

Any way, Mr. Nelson became obnoxious to the Board of Directors, and they intimated that his resignation would be accepted, but he refused to resign. They then elected Mr. Middleton over his head, and Mr. Nelson became angry, and threatened if his salary and other claims against the company were not paid, he would apply for the appointment of a Receiver. Some of the items the Board objected to as not being definite enough, and being unaccompanied by vouchers. One of these was, "Visit to Philadelphia, \$25," which they refused to entertain without further explanation.

It appears, too, that the officers of the company, Mr. Nelson included, signed a contract to take their first year's salary and incidental expenses in stock, at par, less 10 per cent. The Board, there-

fore, instructed the company's attorney to write to Mr. Nelson's counsel, informing them of the action of the Board, and saying that inasmuch as he agreed to accept payment in stock, and had already accepted partial payment in that manner, the company was not disposed to make any change in the agreement between them, but was prepared to carry out its part of it in full, provided he should furnish satisfactory proof of the correctness of the items. Mr. Nelson has sued the company, and the trial is to take place next week.

The new company is doing a very good and paying business, although the bitter opposition on the part of the A. and P. still continues. Negotiations are in progress for the building of a line to Buffalo, in addition to one to Boston. The company is laboring under the disadvantage that nobody seems to want to buy the stock, and the only way it has of having a line built is by paying the contractor wholly in stock at par, less 10 per cent. About \$65,000 in stock has now been issued by the company. The stock is not on the market. Some of it was offered last week at fifty cents on the dollar, with no takers.

Prosperous Business but Small Salaries.

The net profits of the Western Union for the three months ending September 30th were \$136,214.21 more than the estimate at the last quarterly meeting. The stock to-day brings a higher price in the market than it has done in a long time, and in every other respect the company is in an eminently prosperous condition. Yet reductions of salaries and pinching economies in the doling out of necessary supplies seem to be on the increase. We rejoice to see the company making money, but do not think it should forget in its prosperity the men whose labor conduces to this desirable result. When bitter opposition stared the company in the face, and the outlook appeared to point to a suicidal cutting of rates and the handling of business at an actual loss, it very promptly intimated to its employes that if the opposition and small profits continued, they must be prepared for another reduction of salaries. It at the same time hinted, however, that if it could only manage to secure the handling of the entire telegraphic business of the country, the expense of conducting it under one management would be so much less than it necessarily was under two, that the net profits would be much higher, and salaries of employes could then be "apportioned accordingly," to use the precise words of the official organ.

Instead of a vigorous rivalry to cope with, the company has now the field completely to itself, is making more money than it ever did before, with its stock selling at almost double the price it formerly did. Yet there is no word of the employes' salaries being "apportioned accordingly." On the contrary, salaries have been reduced until it seems impossible that they can be got any lower. And the reductions have been made in a manner entirely characteristic of the Western Union. Is it to be wondered at, then, that employes should cherish a feeling of antipathy and distrust toward the company that, in the face of a prosperous and increasing business, and of an almost positive promise to the contrary, took advantage of the prevailing stringency of the times to reduce, under the thin guise of "grading," salaries then in all conscience low enough?

We think the company would find it to its

interest to adopt a little more liberal policy toward its employes. Suppose it try the experiment of judiciously increasing salaries where an increase is deserved, recognizing faithful and intelligent service by promotion, and keeping its promises to the letter. If it did, there would be no necessity for protective organizations, operators would be contented and work so much more zealously for the interests of the company, that in the end the extra amount paid in salaries would prove to be well invested.

At a meeting of the Board of Aldermen in this city December 10th, President Roberts proposed an ordinance authorizing the laying of subterranean telegraph wires under the supervision of the Commissioner of Public Works, provided every telegraph company gives the use of one of its subterranean wires in every street to the Police and Fire Departments. Appended to the ordinance was a resolution granting permission to an association of men intending to call themselves the "Underground Pipe Company," to take advantage of its authorization: Alderman Perley wanted delay. Aldermen Shields did not. Alderman Morris said there could be no harm in letting a company try the experiment. The ordinance was passed by a unanimous vote, sixteen Aldermen being present.

Last Monday's storm caused a serious interruption of telegraphic communication between many points. No reports could be received from New London on account of the wires having been blown down. Reports from Cairo, Ill., Indianapolis, Ind., Keokuk, Iowa, Leavenworth, Kan., St. Louis, Mo., Vicksburg, Miss., and Shreveport, La., were also missing.

Business for the West was much delayed both on the Western Union and A. & P. lines, many of the wires being down, and others crossed, necessitating sending business by roundabout ways. The Pittsburgh and Harrisburg wires worked very hard, and the line between Hartford and New Haven was completely down, cutting off all communication.

The quarterly meeting of the Western Union Telegraph Company was held in this city on Wednesday, December 11th. The President's report shows the net profits for the quarter ending September 30th to be \$1,137,578.94, or \$136,214.21 more than the estimate made at last quarterly meeting. The net profits for the quarter ending December 31st instant, based upon official returns for October, nearly complete returns for November, and estimating the business for December, reserving amount sufficient to meet the claims of the Atlantic and Pacific Telegraph Company under existing agreements, are calculated to be about \$1,014,795.53. In view of the above satisfactory showing, a dividend of 1½ per cent. for the three months ending December 31st was declared.

A LARGE number of subscriptions expire with this and next issue. We hope all will promptly renew, and thus prevent missing any copies of the paper. Will each please also try and secure the name of at least one new subscriber to send with their own.

By the use of the microphone you can hear the rope walk, or the butter fly.—*Boston Globe*. Or the gum drop.—*Free Press*. Or the fall of the year.—*Richmond (Va.) Baton*. Or the crocus, or the channel rail.—*Pittsburgh Telegraph*.

The Electric Light.

Mr. Edison has been granted a patent for his improvements in dividing the electric light. The manner of doing will, however, not be made public for ten days.

It is a curious circumstance that Mr. Edison's experiments upon the electric light, and his alleged discovery of a successful method of so dividing and managing the currents as to make this mode of illumination practicable for general purposes, have made nothing like the stir in this country that they have produced in England. Here the public have awaited developments with patient interest and curiosity, and the prospects of the gas companies have apparently been little disturbed. At the same time there has been no such general activity among inventors and mechanics in making and testing contrivances for the application of the new discovery to practical purposes, while public corporations and private establishments have done little to promote its trial. For once the foreigner seems to have got the start of us, and to be leading the way in the adoption of a great improvement. Mr. Edison's application for a patent in Great Britain is contested on the ground that he is not the first inventor of the light. There can be little question about that, but his claim must be based on a new and original device for making it useful. The inventor of a new and improved steam-engine could hardly be expected to prove that he was the first to employ steam as a motive power, in order to secure by patent whatever is novel and valuable in his mechanism. If that were the case, all advance in the construction of engines would be seriously checked, if not altogether stopped. If his method and contrivance are new and original, and successfully effect a useful purpose, the existence of other methods and contrivances for effecting more or less perfectly a similar purpose can be no bar to his claim, where there is intelligence in the administration of patent laws.

Still, it is true that much more has been thus far accomplished on the other side of the Atlantic than on this toward the practical adoption of the electric light, and a much more eager interest has been displayed on the subject. For a month or two past it has absorbed a large share of attention, and experiments have been actively going on. Electric lighting involves two independent contrivances, one for generating the necessary currents with sufficient power, and the other for their distribution and application to the production of separate lights of requisite intensity. Electric machines operated by steam engines are not new, and different ones have been employed in the various experiments with the light. Sawyer & Man, of this city, use the Hechhausen; Brush employs one of his own; Mr. Edison proposes to use that of Wallace; that of Gramme has been generally used with the Jablochkoff and Rapieff lamps in Paris and London, and the Siemens machine, long employed for coast-lighting apparatus, has been resorted to for other experiments. A new and improved machine has been lately invented in France, especially for use in producing currents for the electric light, and the patent is said to have been disposed of at a high figure. It is that of Meritens, and, though expensive in construction, it is claimed for it that it will generate three times the force of the Gramme machine with the same expenditure of propelling power. The rival lamps are quite as numerous as the generating machines, and the inventor of each claims to have reached a successful solution of the great problem of division. What is known as the Jablochkoff candle is that with which the Avenue de l'Opera, and the Magasins du Louvre, in Paris, have been for some time lighted, and which has been adopted by the London Board of Works in the experiment on the Thames Embankment and Waterloo Bridge. Its adaptability for large spaces has been pretty well demonstrated, but the question of expense is not satisfactorily settled. The Rapieff lamp is the one used in the office of the London Times, and it is represented to be entirely successful, the separate lights on the same circuit being raised and lowered, or extinguished and relighted, without affecting the others. It is also said to be much cheaper than gas. The light which first made a stir in London was that of Loutin, a French inventor, which was set up in the Strand in front of the Gaiety Theatre. One of the later inventions for which great claims are made is the Werdermann lamp, whose inventor professes to have foretold Mr. Edison entirely in the complete subdivision of the current, and its application for illuminating purposes on any scale desired. In this, as in all

those previously mentioned, incandescent carbon is used. Mr. Edison uses platinum.

In France and England several public bodies and many private concerns have interested themselves in the new mode of illumination. The Municipal Council of Paris is somewhat handicapped by its exceptionally favorable arrangements with the Paris Gas Company. The city not only obtains its gas at half the regular rates, but shares in the profits of the company above 12,400,000 francs per annum, and last year derived a revenue of 8,350,000 francs from that source. Nevertheless, the company has no monopoly, and experiments have been made, and will doubtless be extended, in the lighting of streets and public buildings. In England a good deal has been done. Not only is the London Board of Works experimenting on the city thoroughfares, the lighting of which is under its control, but the Corporation has made provision for lighting the spaces in front of the Mansion House and the Holborn Viaduct. Liverpool, Manchester, and several other municipalities have taken the matter in hand, and dock-yards, iron works, railway stations, and numerous manufacturing establishments, have been fitted with electric lights with satisfactory results. For the most part, the trial has been thus far confined to streets or open spaces, and large buildings requiring a great deal of light, and each area, whether open or inclosed, has had its own separate apparatus. The more important and interesting process of lighting an aggregation of private dwellings, with all their separate rooms, great and small, from one common generating source, has not as yet been successfully effected. It is toward this result that Mr. Edison's efforts are specially directed, and notwithstanding all that has been done already with the electric light, it is quite possible that foreign achievements may yet be eclipsed at a single stroke.

It would not be fair to leave the impression that in this country nothing has been carried beyond the stage of unfinished experiments, like those of Sawyer & Man, and Mr. Edison. The Brush light, to which incidental allusion has been made, has been in use for some time in certain large establishments, notably some extensive manufactories in New England, which formerly had to make their own gas. The results are said to be gratifying, not only in the character and working of the light, but especially so in the matter of cost. Possibly one reason why American ingenuity has been slow to wake up to this subject and public interest has been languid is, that we had a period of excitement and anticipation on its account forty years ago, when the experiments of King and Straight promised magnificent results, but had finally to be abandoned without accomplishing their object.

Assurance.

He is young yet, but for unparalleled cheek and unequalled assurance I will back him against any "lightning waffer" who does not break more than five times [on a ten-word message. He has only been a member of our profession for six months, and is the proud possessor of a college diploma, of which fact every person in the territory who enjoys his acquaintance is fully cognizant. The determined manner in which he grasps his key would easily convince the non-professional that he was born an operator. It was his first night on the wire, and as our baldheaded chief adjusted his quid of tobacco and then his relay, preparatory to testing his ability on a fifteen-word cipher message, we drew our chair up to the table and waited the result. Promptly, but nervously, the new man answered the call. The chief donned one of his sweetest smiles and began. The date and address were sent and received, but when the message proper was started, the holder of the college diploma affectionately inquired of the chief if he was suffering with a chill. Such tender solicitation in regard to his health brought a tear to the eye of that functionary, while a distinct halo formed around the end of his rubicund proboscis. But the reaction was sudden. A bright glow appeared upon either cheek, and by the absent manner in which he sent the residue of his quid into the eyes of the office cat, I knew that the chief was getting excited. Again the message was started, but in such sarcastic Morse as to lead the receiver to infer that the entire period between that moment and the millennium was at the disposal of the sender, and would probably be occupied for the transmission of that particular message. Four words were sent in a manner to remind one of drawing teeth, when the new man "opened" for the second time, and informed the chief that if he would 27, he would use every endeavor to copy. This assertion of his willingness to exert himself

created a very favorable impression upon the chief. The key was again grasped, with the intention to send the message in a receivable manner, or perish in the attempt, when the new man added a few instructions relative to adjustment, for which the chief was more than grateful. Again was the message, at snail-like pace, started upon its weary way; but ere it was completed, the new man casually opened his key to ask the sender if he was aware of the fact that upon long circuits the writing should be, not only slow, but firm. He seemed to be ignorant of the fact that the straws he was piling upon the camel's back might be one too many, with the usual result in such cases. Fortunately the chief had a large share of the commodity that Job so abundantly possessed, and resolved to try him once more. The melancholy "pasa" of an unclaimable plug, however, almost upset this resolution, and for fear the *debutante* should again have a few remarks to make, Werner's back-acting volcunograph was placed upon the table, doubly charged and ready at a moment's notice. Things were getting serious, and the probability of a funeral occurring in the little burg where the new man resided, was about as safe to bet upon as was the defeat of Ben Butler for Governor. The "new addition" got impatient, and requested to know if the chief had concluded to postpone the message for a few days, whereupon the message was again started. All of it was transmitted except the "sig," and hope was running high in the breast of the aged chief, when he was informed that the local at the receiving station had given out, and that the message might be sent the following morning, when he (the new man) would make some few arrangements for the better management of the wire, and—Before I could prevent it the volcunograph had been put into position, and the new operator at that office gives me sufficient grounds to inform Werner that his invention is a complete success, but that his theory that operators do not die, is proven beyond the possibility of a doubt to be incorrect. LESTER.

The Carbon Telephone in England.

The London Times of Nov. 12 gives an account of "some interesting and valuable experiments on electric telephony, between Norwich and London, under the most adverse circumstances of bad weather and powerful induction of neighboring wires. These experiments," the Times says, "had for their object the confirmation of some extraordinary statements that had appeared in the American journals respecting the ability of the carbon telephone, one of Mr. Edison's numerous inventions, and perhaps one of the most important, to work over great distances and under conditions unfavorable to other systems—conditions which up to the present time have been the chief obstacle in the practical use of electric telephony." The wire stretched from Messrs. Colman's works in Norwich to their office in London, or a little over 115 miles. It ran over the same poles as other wires. When the experiments began, the incessant crackling and bubbling sounds in the receivers revealed the fact that the adjoining wires were being worked to their fullest capacity, and that induction could hardly be worse. The first exclamation uttered in Norwich was heard perfectly in London. Conversation was carried on without difficulty, and the Yankee accent of Mr. Edison's agent was distinctly recognizable. Remarks passed on the weather showed that there was a storm of sleet at both ends. The conversation was best heard when carried on a little below the ordinary tone of voice. Toward 9 P. M. the induction disturbances grew less, but were still considerable. The voices from Norwich were louder, and the individuality of the speakers more marked.

ASTOUNDING DISCOVERIES.

Commenting on these experiments, the Times says:—

"Remarkable as they were, they appear to be outstripped by what has been achieved in America through the same instruments. Mr. Prescott, the chief electrician of the Western Union Telegraph Company, says that they have been successfully used when included in a Morse circuit, and that several stations could exchange business telephonically upon a circuit that was being worked quadruplex without disturbing the latter."

This was done by Mr. Henry Bentley, of Philadelphia. It has also been tried with success over a wire 720 miles long. The Times continues:

"Mr. Edison has lately made a new and improved receiver to his instrument, of which he says, in a recent letter to Col. Goureaud, that by its means Batchelor, one of Mr. Edison's assistants, 'heard a

whisper last night fifteen feet away from the receiver, and ordinary conversation comes out into the room almost as originally spoken. If this receiver proves as practicable as the carbon transmitter, a new era has opened in electric telephony, and soon we may hope to have the speeches in the House of Commons heard at all the clubs in the metropolis."

One of these receivers is now at work in Mr. Edison's laboratory. Words spoken miles away are heard within the room, and so plainly that they are distinctly heard in any part of it. A whisper is heard from fifteen to twenty feet. The inventor says: "I think it entirely practicable for an audience miles away to hear every word uttered by Henry Ward Beecher in delivering his sermons at Plymouth Church. The debates in Congress, as well as those in the House of Commons, may also be heard by an audience anywhere."

Lack of Canadian News in "The Operator."

Royalty has come to stay with us, as you have no doubt heard, and we are happy. Yes, more than that, we are considerably enthused. Patriotic fervor, or fever, I hardly know which to call it, has been alarmingly rampant for the past few weeks; but our new Governor has at last reached the capital, and we have settled down to our wonted state of inactivity again. I cannot see how it is that amid the "roast" of addresses he received no mention is made of one being presented from the telegraph profession. It would have been quite a novelty had one been prepared and nicely engrossed in the Morse code, and I have no doubt it would have been well received. Probably our Eastern brethren will yet take the initiative. I am sure they can count upon the hearty co-operation of their friends in the Western Province, who would gladly embrace the opportunity of thus giving expression to their loyal sentiments.

But that is not what I am writing for. I am of the opinion that THE OPERATOR does not receive the support it deserves at our hands, and I would like to convince every operator in the Dominion that it is his or her solemn duty to take it. A feeling of indifference is manifested by the majority of them, which is exceedingly difficult to combat in soliciting subscriptions. The principal complaint seems to be that there is a lack of Canadian news in it, which, I am sorry to confess, is too true; for, with the exception of a spicy and readable letter from that unfathomable *incoq*, Q. Cumbers once or twice a year, we are at best but poorly represented. Why the paper should be blamed for this state of affairs I cannot imagine. I think, on the contrary, that it should only make us ashamed of ourselves, and be the means of waking us up from our lethargic state, until, thoroughly convinced that the fault, if any, is wholly our own, we see the necessity of making an effort to bring about a reform. The indifference I have spoken of seems to be so deep-rooted that unless those few who are struggling to eradicate it are assisted by the operators at large, very little can be accomplished, and, as a consequence, those who recognize the claims of the paper, and endeavor to extend its circulation and widen its sphere of usefulness, meet only with discouragement. I do not think such a state of affairs should be allowed to prevail, especially when a concerted effort on our part is all that is necessary to remedy it; and, much as I deplore the conspicuous absence of Canadian correspondents from the columns of THE OPERATOR, I do not think this should be used as an argument that it does not possess sufficient general interest to recommend it to American and Canadian readers alike. It is strictly an operators' paper—something more than a fortnightly supplement to a tariff book; it is well furnished with information concerning the latest developments in electrical matters; its staff of regular contributors challenges that of any other kindred journal; each issue brings us something new and spicy from one or more of them, and I, for one, fail to see any cause for complaint through lack of interesting matter. I do not wish to shock your modesty by flattery, but I would like to talk plainly to those who are so short-sighted as to allow year after year to pass by without adding their names to your subscription list. Let us stir up this "Canada of ours," as we call it, and see if we cannot contribute our quota to the general fund. I hope I will not be considered presumptuous in bespeaking the co-operation of the editor in an attempt to further this end.

A pretty good story is told of the recent very heavy rains we have had in this section. I speak but mildly when I say that the mud has been something awful. While out for a stroll the other day

I encountered a hack on one of our principal streets so deeply embedded in the mire that the horses had to be detached in order to get it out; but it appears that in Toronto, our queen city, things have been considerably worse. One day last week on Yonge street a stranger was noticed very excitedly watching something in the middle of the road. Following the direction of his gaze, the cause of his rapt attention was soon apparent. A rough-looking hat was seen floating on the sea of mud, performing some very queer antics for an inanimate object, keeping up a continual bobbing and undulating motion as it drifted along. The stranger followed it until it gradually drew near the curbstone, when, leaning over very carefully, he grabbed the hat, and was astonished to find it covered a human head. The owner of the hat gruffly demanded his property from the stranger, who, with eyes fairly starting from their sockets, exclaimed, "What in thunder are you doing down there, old man?" "Why, you fool," says he, "I'm driving an omnibus. Give me my hat and let me go." Rox Mullen and Dick Storey can corroborate this. ALLE.
Slabtown, Ont., Dec. 6th.

Chicago Notes.

The first and most important change to be noted is the appearance here of Supt. Clowry, formerly of St. Louis, as Assistant General Supt. The full meaning and scope of this change, aside from official sources, is a matter of conjecture. The gentleman, presumably, if not actually, will be General Supt., for it is current that Gen. Stager will be in New York most of the time. Supt. Clowry comes to us with the reputation of being an excellent executive officer, a shrewd and successful business man, and, we believe, usually candid and honorable with the employees. His succession is a matter of disgust to Supt. Wilson, who has long been hugging the delusive fancy that he would be the favorite. Regretting, as we do, to lose Gen. Stager, it is a subject of congratulation, however, that Supt. Wilson has been "left out in the cold," and it would be still a greater one if he were left out entirely.

Several new faces, though time-worn and scarred in the business, appear among us, at fifty dollars a month—notably, John Torrence, late of Wheeling; Mr. Derrickson and Mr. Loomis, of Cleveland; and one or two others, with whose names and reputation the management have not yet acquainted your correspondent. Some, too, have gone, the victims of managerial malignity—Mr. Campbell, for instance, the young giant. Mr. Wellner has accepted a position, and departed for New Orleans. Mr. Storey, spoken of by "Juno" as leaving for the East, is at work again; he had some difficulty with the officials, and was only on the suspended list, as are several other unfortunates.

Mr. Nohe, formerly an employé of this office, but at present a private banker (?), is getting himself warmly disliked. He is one of the Shylocks spoken of by "Proteus" as, "compared with whom, pawnbrokers are a godly set." This pitiful creature has been "doing unto others as he wouldn't like them to do unto him," by loaning money to the boys, whose unfortunate necessities compelled them, in some instances, to borrow money at the rate of two dollars for ten dollars for fifteen days. Some have paid this exorbitant interest and principal, and others have paid more, and some less, on various sums, but now there is a united and vigorous "kick." A lawyer has been retained, and where *usury* has been paid, it is proposed to bring suit for recovery, and in all cases where the principal has been paid in interest installments, they propose having it so applied as to liquidate the principal, and thus prevent the gentleman (?) from collecting even a legal rate of interest. Right, boys; and when completed, let your experience guide you clear of such curses again. Be economical, sober, industrious, and honorable. That is the slow, steady road to a permanent prosperity.

The new Board of Trade line is meeting with a success beyond any one's expectations. They have recently fitted up a new office in good shape, and added another operator, Mr. Cameron, recently of Milwaukee, to the force.

John Smith has gone to Peoria to sub. A. J. Gallagher is sick. Mr. Dixon has been added to the night staff. The Bell Telephone Company have sadly interfered with Metropolitan line's business, and it is believed that several Jancsville graduates must return to the sweet solitude of rural life as a consequence. Indications now are that the Telephone is a successful college fighter, and here, at least, it will prevent C. W. Jones from importing any more of the Jancsville "plug-uglies." XENEX.

Press and Individual Opinions of Christmas Evergreens.

"A very pretty compilation."—*N. Y. Eccl. Post*.

"It is an exceedingly pretty little volume. The engravings are superior and the typographical appearance excellent." *Philadelphia Record*.

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"Admirably arranged and handsomely illustrated, 'Christmas Evergreens' is emphatically the most complete and comprehensive work of the kind published. W. A. CULP."

Henderson, Ky., Nov. 27.

We can indite no word notice of this volume that will do justice to its merits. It is a beautifully printed and bound souvenir for the holiday season, and is among the rarest and best of that class of literature.—*Washington Republican*.

"This evening I called at the places of business of a few of my friends and got 23 more names. Please send 23 copies in addition to the 6 ordered this afternoon. GEO. E. MILLAR."

Austin, Nev., Nov. 27.

"Last lot of books received, and all are very much pleased with it. If I had time to run out during the day I could sell a large number of these beautiful books. Please find money order for six more. Think I will have another lot sold by the time I receive these. WILL MURRAY."

Lebanon, Pa., Dec. 5.

"I should like to see 'Christmas Evergreens' in the possession of every member or the fraternity, for I believe it would be the means of elevating their thoughts, and refining and dignifying their manhood. To that end, and for that purpose, I shall do all I can to circulate it extensively. R. W. L."

"This is the cheery title of a collection of choice poetry, dressed in fitting and dainty attire, and forming one of the most attractive of the low-priced gift books. The selections comprise gems from several poets, profusely illustrated with charming wood engravings. Although designed for holiday trade, it will be found a work of permanent interest, and its extremely low price commends it to persons of slender purses. Handsomely printed on heavy tinted paper, bound in cloth, with gilt edges."—*Norristown Herald*.

"W. J. Johnston, New York, issues a prettily bound and reasonably priced collection of poetry for the holidays, selected and arranged by himself, and comprising gems from many of the first American and English poets, accompanied by a profusion of wood-cuts of varied subjects. Like his 'Lightning Flashes,' the book will be of peculiar interest to those connected with telegraphy, including poems on 'The Telephone,' by Benj. F. Taylor, and 'The Telegram,' by Sarah E. Henshaw."—*Publishers' Weekly*.

"I must confess that I am agreeably surprised at the appearance of the book. Of the many holiday books issued annually, there have been very few, if any, heretofore, which, being placed at such a low price as to be within the reach of almost every one, were at the same time really gotten up in the best style of typographical art. You have been successful in producing a book of intrinsic merit, both from a literary and artistic point of view, and one that agents can conscientiously recommend as being worth much more than the advertised price, although not having the appearance of 'cheapness.' The outside is particularly attractive, the engravings are clearly cut and appropriate, and you have been very happy in selecting such a variety of poems that whoever enjoys poetry at all will find some favorite in the collection. J. C. SHERER."

Los Angeles, Cal.

Now is the season for getting up clubs, and we hope the readers of THE OPERATOR will specially exert themselves at this time to increase the circulation and consequent usefulness of the paper. Every reader can at least secure one or two new subscribers without much trouble. Send postal card for extra copies of the issue of January 1st for getting up clubs, which will be mailed you free. Personals and other items solicited.

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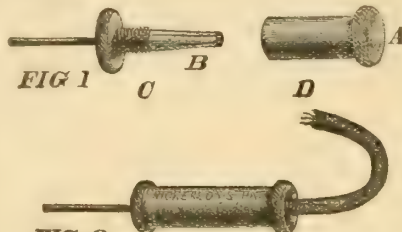


FIG. 2

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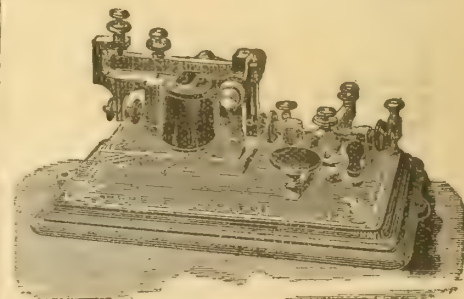
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